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ON THE SO-CALLED ECZEMA MARGINATUM OF
HEBRA (*TINEA TRICHOPHYTINA CRURIS*), AS OBSERVED IN
AMERICA—A CLINICAL
STUDY.

(Read at the First Annual Meeting of the American Dermatological Association,
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That there is a parasitic disease of the skin which shows individual characters, dependent on its peculiar location upon the thighs near the groin, there is no longer any doubt. The subject was thoroughly studied and discussed several years ago by Bärensprung, Hebra, Köbner, Pick and Anderson, and certain quite definite conclusions arrived at, which have been accepted by the majority of recent observers. It is my desire, in the present paper, to call attention to the disease as it occurs in this country, where it is not very infrequent, confirming the descriptions of others, as far as relates to the ap-

pearance of the eruption in New York city, where, however, it presents features very much less marked and severe, in many instances, than those described by writers in other countries; for I am not aware that it has ever been particularly touched upon by an American writer. I desire also to urge a plan of treatment which has been universally successful in my hands, but which is little known and hardly alluded to in the text-books.

This eruption was fully described in 1855 by Bärensprung¹, who found a parasite in all his cases, and who named the disease *herpes inguinum*; it must be mentioned that Devergie, in the preceding year² had mentioned it very briefly as a variety of *herpes circinatus*, or ringworm of the body. In 1860, five years after Bärensprung, Hebra, in the first edition of his book³, gives exactly the same clinical picture under the name *circumscribed eczema* (*das umschriebene eczem*), or *eczema marginatum*, claiming that it is simply a variety of eczema; and this name, *eczema marginatum*, has since clung to the disease. Bärensprung was right in his perception of the true nature of the eruption and Hebra was wrong; the former died soon after and his description was forgotten, and the error in regard to it was not finally cleared up until nearly ten years later, when, after investigations by Pick⁴, Hebra himself⁵ acknowledged the existence of a parasite, and afterwards, in the second edition of his book⁶, he described it as *eczema marginatum parasitarium*, still treating of it as a variety of

1. Annalen des Charite Krankenhauses zu Berlin, VI Jahrg. Heft I., 1855, p. 150.

2. Devergie—Traité Pratique des Maladies de la peau, Paris, 1854, p. 274.

3. Handb. des Speciellen Pathol. und Therap. Virchow, Band. III, Hebra, 1860, p. 361.

4. Archiv. für Dermatologie und Syph., Vol. I., 1869, pp. 61 and 443.

5. Archiv. für Derm. und Syph., Vol. I., 1869, p. 163.

6. Lehrbuch der Hautkrankheiten, Zweite Auflage, Erlangen, 1874, Band. I, p. 485.

eczema. It may be added, however, that Köbner¹, in 1864, had found a parasite in eczema marginatum, had inoculated himself from it, and had, furthermore, claimed that the disease was but a herpes tonsurans of these parts; to this Hebra answered that the disease which he called eczema marginatum was a different affair, and that there was no fungus in it. This seemed to settle the question, until it was successfully re-opened by Pick in 1869, as before stated.

To show that the same affection was intended by each of these writers, as well as to furnish a means of comparison with the disease as observed here, I will briefly quote their descriptions:

Bärensprung says:² "There is an affection which has been generally known as hemorrhoidal erythema or eczema, which, although very common, has found hardly any mention in dermatological works. According to my experience, it is more common in men than women, and, as it appears commonly during the middle period of life, it is generally looked upon as a consequence of hemorrhoidal disturbances. It appears mostly in a limited area, embracing the external genital region and the anus, and is accompanied by a more or less severe itching. It occupies, by preference, that portion of the skin on the inner sides of the upper portion of both thighs which is in contact with the scrotum, and therefore almost always appears as if caused by pressure of the scrotum; it often extends on to the mons veneris, occupies the perineum and the region of the anus, and even the skin of the scrotum and penis itself.

"The diseased surface is sharply bounded by a curved or irregularly bent line, and the skin enclosed by it is red and rough, in many cases so dry that the disease resembles an erythema or a pityriasis; in other cases it appears excoriated, and to a certain degree moist. In still other cases the border is covered with small vesicles, or even small pustules, which

1. Klinische und exper. Mittheilungen aus der Derm. u. Syph., Erlangen, 1864, p. 6.

2. Annalen des Charite Krankenhauses zu Berlin, Bd. VI, 1855; Heft I, p. 150.

pour out a watery fluid which dries to thin crusts. In cases of this kind the accompanying itching is very severe, and the eruption appears more as an eczema or an eczema impetiginodes.

"The following are the grounds upon which," continues he, "I hold that this affection is essentially identical with the hitherto described forms of herpetic disease, and on which I class it as a herpes" (he meaning thereby our present *tinea circinata*):

"1. In all the cases I have found, in the epidermal scales and debris scraped from the affected portions, a vegetable parasite, that is, a branched and jointed mycelium which agrees perfectly with that found in the other forms. This vegetates in the superficial as well as in the deeper layers of the epidermis, in the root-sheath of the hairs, and attacks even the hairs themselves. I found the scrotal hairs brittle, and here and there filled with the neck-lace like threads of fungus, as seen in the hairs of the head in herpes tonsurans.

"2. The affection appears as a purely local one; it is not connected with any general disturbances, and is cured rapidly by the employment of purely local measures, and that without any injury to the general health.

"3. The disease has the same peripheral mode of extension as have the other herpetic affections.

"4. The disease appears in many cases to be communicated by contagion."

Without commenting on this for the present, other than to say that Bärensprung proceeds to detail a number of cases which furnish most perfect clinical corroboration of the above, I will at once quote Hebra's description, as it appeared in the first edition of his book in 1860¹, or fully five years after Bärensprung has published his article; Hebra's description is given without the slightest reference to the latter.

Hebra says, "By the designation eczema marginatum I indicate a peculiar form of eczema, which is separate and distinct from all other varieties of the disease, by its constant localization on the inner surfaces of the thighs, on the mons

1. Hebra, Acute Exantheme und Hautkrankheiten, 1860, p. 361.

veneris, and on the buttocks, by its peripheral extension and simultaneous clearing up of the center, by the distinct limitation of the periphery of the affected portions by an elevated line, on which the phenomena of eczema are especially developed, and finally by its almost exclusive occurrence in men, especially in shoemakers." "It always begins on the inner surface of the thigh, in men where the scrotum touches it, generally on the left side, there first appears a small, round, elevated spot which itches, is scratched and small punctate excoriations are seen. Shortly the center pales, so that only the red border is visible. Here we see sometimes papules, sometimes vesicles, sometimes excoriations, and later, in consequence of the drying of the exudation and the blood extravasated by scratching, small brown or black crusts are seen. The disappearance of the eczematous appearances in the center corresponds to the peripheral spreading of the disease, so that the originally small spot increases to the size of the hand. When it occupies this extent the central portions show considerable pigmentation, and the whole affected surface contrasts strongly with the healthy skin. Here and there in the central pigmented portion, single, small punctate, new developments of the eczema are seen, but the principal eczematous phenomena are observed on the outer edge." * * * * "The eczema seldom remains confined to the originally affected surface of the thigh; it generally spreads to the immediate neighborhood by the new development of the round patches, increasing to circles, or, the other thigh is affected symmetrically, the eruption gradually extending above, below, and behind, until, in untreated cases of long standing, the disease may reach to the navel, down to the knees and cover the buttocks." Hebra has also seen it extend to the back, breast, and neck, and once, on a female, even to the extremities.

Hebra at first questioned if this eruption were not an eczema modified by syphilis, but there is no mention in the first edition of his book of a suggestion occurring to his mind that it might be due to a parasite, which is a source of wonderment, considering how closely his clinical description corres-

pounds with that of the behaviour of the vegetable parasitic eruptions, bearing in mind also Bärensprung's observations published five years previously.

There can then be no doubt that Bärensprung and Hebra were giving an account of the same affection, indeed the description of the latter seems almost as if taken from that of the former, so minutely do they describe the same appearances, in much the same words, a striking instance of the accuracy of the two brilliant clinicians, as Hebra does not seem to have seen the article of Bärensprung. In the second edition of his work he does refer to Bärensprung, not, however, to the description just quoted, but to a second article published in 1862, that is, *after* his own description had appeared; in this second article by Bärensprung the same disease is alluded to under the term "erythrasma," to which less than a dozen short lines are given. The object of this diversion is to give the credit to Bärensprung, to whom it belongs, as being the first to accurately and carefully describe the disease under consideration, he giving to it a name, *herpes inguinum*, which indicated its true nature (for by "herpes" Bärensprung and others of his time and later understood a vegetable parasitic disease, as it is now recognized to be); while the name *eczema marginatum* signifies nothing.

It is equally evident that Köbner in the work before referred to, intended the same affection, the clinical details of the first of his cases answering so perfectly to those given by Bärensprung and Hebra that it is needless to reproduce them here.

Finally, a number of Pick's cases were observed in the wards of Professor Hebra, and the diagnosis of *eczema marginatum* was made by him before Pick demonstrated the presence of the fungus parasite in them; their description, therefore, need not be given.

I cannot, however, forbear quoting here Devergie's brief description of the same eruption, written, as mentioned, in 1854, or the year before Bärensprung's article appeared, and six years before Hebra. Devergie, like Bärensprung, also classes it as a *herpes*; with *herpes circinatus* and *herpes ton-*

surans, but he was not familiar with the microscopic parasite, except by hearsay in regard to herpes tonsurans, and he does not suggest its existence in the affection under consideration.

Says he,¹ "There is one variety which is very commonly observed on the upper and inner surface of the thigh, in the neighborhood of the scrotum; it is a sort of a herpes circinatus in which the vesicles are more apparent and more secretory, and at the same time cause more burning and heat than is observed in the other varieties. The affection may readily be mistaken for intertrigo, for the contact of the scrotum with the thighs develops both affections. The existence of a circular, raised margin in this eruption, and its absence in intertrigo, distinguish the two afflictions apart, as does also the more abundant secretion in intertrigo. Herpes is a rebellious malady, in most cases easily reproduced."

To complete the bibliography of this discussion, mention should be made of the fact that McCall Anderson² in 1868 recognized and demonstrated the parasitic nature of this disease, and his description, as also his cases, answer in every way to the features of the disease as already detailed.

As illustrative of the clinical features of the eruption in this country, I will mention briefly twelve cases, of which I have full notes, all of which except two occurred in private practice, and in ten of which microscopic examinations were made, revealing the presence of the parasite in every instance.

CASE I. A well known physician in New York aged, about 38, has worn a suspensory bandage for a varicocele for years; occasionally there has been some chafing of the thigh from it, but no serious skin trouble resulted until one month before his visit to me. He then noticed a small circular spot with well defined edges on the upper and inner surface of the left thigh, which continued to increase in size and to give more and more annoyance by its itching until he came under my care.

When first seen there were two rings, not circular, on the inner surface of the thigh, where the scrotum rested against

1. Devergie—*Traité pratique des maladies de la Peau*, Paris 1854, p. 274.

2. On the parasitic affections of the skin, London, 1868, 2d. edition p. 76.

it: one of them was about an inch in diameter, and the other one and a quarter by two inches. They were healed in the center, leaving a brownish and rather mottled skin, from which scales could be easily raised by moderate scraping. The margins of the eruption were very clearly defined, of a moderately active red color, composed in part of separated papules, but in the main the margin was unbroken; it was rapidly extending, leaving a cleared surface behind. This margin was distinctly, although very slightly, elevated. The side of the scrotum, (which lay against this surface in the night, unprotected by the suspensory) was red, itchy and presented some papules, which also could easily furnish scales on scraping.

Removing the scales and placing them in liquor potassae and glycerine, on the slide of a microscope, magnifying two hundred and fifty diameters, they were found to present the mycelium and sporules of a fungus growth in great abundance, which resembled mainly the *trichophyton tonsurans*.

Sulphurous acid alone was prescribed, with directions to bathe and rub the parts freely with it, using it as strong as it was possible to procure it. The relief afforded was instantaneous and perfect, the language of the patient at the next visit being as follows: "You can hardly appreciate the exquisite relief given by the sulphurous acid when the itching comes on; it is perfect." Five days after the first application the margins of the eruption were still very well defined, much less elevated and with yet some scaling; the disease which had been rapidly spreading was completely arrested. Three weeks later, when last seen, the eruption on the thigh was well, the scrotum was still red, and covered with a glossy coating of cuticle, already separating, which had resulted from the too severe application of the sulphurous acid. From a letter still later, I learned that the eruption was cured at the end of one month from the first visit.

CASE II. A. K. C., a large and somewhat fleshy gentleman, aged 30, first noticed a ring on the inside of the right thigh about three or four weeks before his first visit to me. On the following week a patch appeared on the opposite thigh, both of them being where the scrotum lies on the part. About

the same time or shortly after, he found an eruption in both axillæ. He attributed the disease, with much probability, to a contagion acquired in Mexico, whence he had just returned, he saying that the filth of the country was such as to engender such diseases; he stated that it was a common custom there for the natives to wear the clothing of strangers sent to be washed, for a period before returning them; the clothes would often be retained thus two or three weeks before they could be gotten back.

When first seen the following conditions were recorded: On the right thigh was a very distinct ring, with a clearly defined margin, red, and slightly raised, of a line or two in breadth. The center of the patch, which was irregularly shaped and about four inches in diameter, was dry, of a dirty brown color, and slightly scaly, contrasting strikingly with the sharply cut margin; around the outside of the patch were a number of separate and isolated papules, flat and of a reddish color. On the left thigh there was a similar patch, but of much less extent. In the axillæ the eruption presented the usual appearances of ringworm of the body, and no other portions were attacked except those here mentioned; in the right axilla the disease occupied an area of about two inches in diameter; in the left axilla there was one small circle, about three-quarters of an inch in diameter.

The microscopic examination of the scales scraped from the margin showed a moderate amount of fairly luxuriant mycelium, and an abundance of spores. Sulphurous acid was ordered to be freely applied in full strength, and six weeks later he was next seen, after returning from a trip South, as purser of the Havana steamer. He reported that the first application of the acid checked the eruption and arrested the itching at once, all of the cutaneous lesions disappearing entirely for a time. He then exhausted his supply of sulphurous acid, and had had none for twelve days, and the eruption had spread very luxuriantly during that time, especially during the last four days, which had been very warm and damp. There was now seen a large circle around the anus, occupying all the soft portion between the buttocks, with the same clearly defined, slightly

prominent, red margin, and the dirty, yellowish-brown centre. It had also increased materially on the left thigh, and there was also the same on the left side of the penis and scrotum; under the arms the tinea was spreading, and on the right side of the neck there was a small, typical ringworm. The eruption about the anus was scraped, and the parasite found in the scales.

At a later date, two or three other spots of tinea circinata were seen; one on the left leg, near the ankle, and two on the left thigh, elsewhere than where the eczema marginatum existed in the crotch. As an adjuvant to the sulphurous acid, he was ordered the compound tincture of green soap, and an ointment of turpeth mineral, fifteen grains to the ounce, to be kept applied at night; it was to be washed off and the acid applied in the morning. Six days from the second visit the eruption had lost all of its distinctive characteristics; there was no more itching, and he went to sea again, apparently cured. He was directed to continue the use of the acid for a season, to prevent a relapse again.

CASE III. J. E. S., aged thirty-five, was brought to me by his physician, during the intense heat of August, 1876, suffering terribly from what appeared to be an ordinary eczema of the whole region of the penis, scrotum, anus and abdomen. His history was, that he had had an eruption on these parts for at least three years, varying with the season and treatment, at one time better at another worse. He was also said to have had eczema of the ears five years or more ago, the remains of which had hung on ever since, in the way of scaling and some itching; he had also had what appeared to be eczema tarsi for a long time.

He was placed upon a treatment for his eczema of the genital region, consisting of alkaline and starch baths, dilute tar wash, followed by mild zinc ointment, and laxatives and alkalies. Very great relief was obtained, and, with certain other adjuvants, the case progressed very well, so that by the end of two weeks all, or most of the soreness was gone, the surfaces were dry, and the patient was quite comfortable. But still the disease seemed to remain in some localities, and resist various

stimulant measures for eczema, although by constant employment of remedies, he was comparatively free from annoyance.

After all acute symptoms had long disappeared, two months and a half after his first visit, on examining the parts very carefully, or rather on taking a general look at the affected surface from a little distance, I noticed that there was a distinct red margin on both thighs, slightly raised, and of a color which contrasted strongly with the surrounding healthy tissues, and also with the skin enclosed by it, which was of a brownish-yellow. Placing some of the scales scraped off, beneath the microscope, they were found to be loaded with the mycelium and spores of a vegetable parasite; and certain hairs which were included in the specimen, were affected as in tinea tonsurans. This led to an investigation of the ear disease; and the scales taken from the auditory canal were examined, and found to contain fungus in abundance, the mycelium quite predominating, branching, often with enlargements and knobbed ends. In comparing the parasite with that seen in a fresh case of tinea tonsurans on the head of a child, which by good fortune appeared at the office on the same day, all the elements were found to be much smaller than those of the trichophyton, and corresponded more to the aspergillus. An examination of scaly crusts removed from the eyelids, showed also the presence of a parasite.

Here, then, we had the explanation of the chronicity both of the ear and eye trouble, and of that about the thighs. They had gotten better for a time under treatment for several years past, but the disease ever relapsed when not actively combatted, so that the patient, even when he considered himself comparatively well, had never been free from annoyance from the itching in the ears and about the thighs, and at times the distress had been very great. There had been the constant presence of the vegetable growths, which remained quiescent much of the time, but which always caused some irritation, and, when occasion invited, gave rise to much trouble. There can be little doubt but that the acute eczema of the penis, scrotum, and thighs, with which I saw him first, was the result of scratching; and when the irritation was, in a measure,

relieved and scratching forbidden and prevented, the parts subsided to their chronic state in which the parasite was afterwards found.

Sulphurous acid was given him, when the parasitic nature of the affection was discovered, to be freely applied in full strength, and three days later it was recorded that there was very great change in the appearance of the thighs; all the marginated character of the eruption was gone. He had thought that there was comparatively little annoyance given by the disease at the previous visit, as it had been only what he had borne for several years, but on this occasion he expressed the greatest relief from that incessant irritation which had made him always conscious of the presence of the disease; the difference between his expressions before and after the use of the sulphurous acid was remarkable; he repeated so many times that he had experienced the greatest relief from it.

He was also ordered sulphurous acid, diluted with an equal part of glycerine, to be painted in the ear, and six days after its use it was noted that the ears were better than they had been for years. The eyes were bathed with a weak solution of soda, and a weak red precipitate ointment was used, to their great benefit.

There were some changes made in the treatment of the thighs, from time to time; occasionally the sulphurous acid would prove too severe, and an acute irritation would require other treatment for a while, but in the main the acid was persisted in, and at the end of about three months it was recorded that the thighs were entirely well; that the ears, which had given trouble incessantly for four or five years, were perfectly healthy, and that the eyes were in better condition than for many years. For the latter he wore glasses to correct an error in accommodation, as suggested by Dr. Roosa, who saw the case with me and assisted in the treatment given to the eyelids and ears, concurring in regard to the parasitic nature of the eruption in these localities.

I may add that a number of times during the treatment of the case scales were scraped from the diseased surfaces, and the

vegetable parasite was repeatedly found; also that in one axilla there was a quite distinct ringworm, of ordinary appearance. One more feature in reference to the eruption about the thighs was the occasional development of the same, sharply defined, flat, dull red papules of varying size, just outside of the ring of the so-called eczema marginatum, as was mentioned to occur in the first case, and occasionally the same within the area which had been passed over by the disease. These, as in the other cases, were considered to be new exhibitions of the parasite, and more assiduous application of the sulphurous acid caused their disappearance.

This patient remains under observation from time to time; I saw him socially a few weeks since, and continues free from the eruption which had annoyed him for years, the true nature of which had never before been suspected.

CASE IV. Dr. Y., aged about 33, a physician of a neighboring city, consulted me in reference to an eruption which had existed a long while on the upper and internal surface of the right thigh. There was then a patch five or six inches long by one and a half to two inches wide, corresponding to the surface of contact of the scrotum and thigh. The margin of the surface was very sharply defined, being of a decided red color and slightly raised, with some outlying papules possessing the same features. The center of the patch was also somewhat reddened, the tissue slightly thickened and a moderate amount of scaling present, which could easily be increased by scraping. Microscopic examination showed abundance of spores filling the field, with some mycelial threads.

The history was that he had had irritation in this locality for several years, during which time he has had boils and carbuncular swellings on the scrotum; he has never been free from irritation and an eruption in this region, he says, for twelve years, although from his extreme cleanliness the disease has been kept within its present boundaries. The itching from it at times has been intense.

Sulphurous acid was advised to be freely applied, and by a letter I learned that it was followed with apparent benefit, but was discontinued after a few days in consequence of the dis-

tress to the respiratory passages caused by the fumes which arose from it. I have not seen him since, but he promised again to try the acid and report.

CASE V. M. H. D., aged 29, presented the most marked example of a general eruption of tinea circinata which I have ever met with, and with it he had the marginated eruption about the genito-crural region. He had had the eruption for at least three years, and from the description of the case, recorded several years ago, it appears to have spread from below upwards, appearing first on the lower limbs. It had been located in the genital region for about two years previous to his visit; about a year after this it reached the neck, soon appeared on the face, and lastly on the left hand.

At his first visit the condition was noted as follows: The larger part of the body is covered with an eruption consisting of somewhat elevated, reddened circles, enclosing brownish-yellow, desquamating surfaces. Many of the circles are irregular, and in some instances quite broken, but the scaly surface exists almost everywhere, with occasional islands of unaffected tissue. The eruption really extends from the sole to the head, the face and neck having many ordinary ringworms upon them; the eruption had not extended into the hairy scalp except very slightly at the back of the neck, where the hairs were stumpy.

About the genital region the eruption possessed the characters described in the former cases of eczema marginatum—that is, on the sides of the thighs adjoining the scrotum were circles of reddened and slightly raised tissue, with moderate tendency to moisture, enclosing a brownish-yellow surface, slightly roughened. The itching and general irritation from the eruption was terrible; the patient walked around the office incessantly, being unable to sit long on account of the soreness of the buttocks from the disease.

His wife and children, he said, had all had attacks of ring worm.

Microscopic examination of the scales scraped from a number of places showed them to be loaded with the mycelium and spores of the *trichophyton tonsurans*, and the examination was

repeated at a number of successive visits, always with the result of finding an abundance of the parasite. This was the first time the scales had ever been thus examined by a physician, and this the first suggestion of the true nature of the affection, although he had suffered from it for several years and had seen a number of physicians.

He was placed upon the pure sulphurous acid, to be freely applied, and in less than three weeks it was noted that the entire skin was nearly free from eruption. With the increase of warm weather in August the disease seemed to gain headway and again to give great annoyance; he was then ordered to use sulphurous vapor baths, several times weekly, and to continue the acid. By September 1st the baths had cleansed the skin greatly, but in spite of all treatment the parasite was still discovered in abundance by December 10th.

One year from the first visit he called to report that the eruption was about gone, there being, however, still a little on the neck, buttocks, feet, and left hand. He was in excellent spirits, the relief from the itching being very great; he was persisting in the use of the sulphurous acid and wished no other remedy to conquer the disease. That portion about the genititals ceased to give trouble very early in the treatment.

CASE VI. M., aged about thirty, for four years had an itching eruption at the upper portion of the thighs and in the crotch; it commenced after the repeated use of Turkish baths for several months, and had continued to spread ever since, the itching has been very great.

When examined the inner surface of both thighs for a distance of about six inches from the crotch, was the seat of a brownish, dry, scaly eruption, with a well defined, reddened edge; the eruption extended back, well on to the buttocks. The condition of the scrotum was not noted. Examination with the microscope of scales scraped from it showed the abundant presence of fungus. He was placed upon sulphurous acid, but was seen only once and the result is not known.

CASE VII. Mr. T. V. C., aged 54, first noticed a small red spot on the inside of the left thigh, where the scrotum touches it, four weeks previous to his visit to me. This continued to

increase circumferentially, and other small circles appeared and developed, coalescing with the first one until his visit. It was recorded then that on the inside of the left thigh there was a patch of eruption about the size of the palm of a large hand, the center of which was healing, and the margin was distinctly defined and a little elevated. On the same side of the scrotum an exactly corresponding eruption was seen, the center of which was reddened and slightly scaly, and the margin was sharply cut, of a bright red, and moderately elevated. On the inside of the right thigh a single smaller spot had developed, and on that side of the scrotum the same was seen, in such a position that when the latter was allowed to rest on the thigh the two diseased spots exactly matched.

A microscopic examination of scales scraped mainly from the left side, revealed the mycelium and spores of a vegetable parasite, quite abundant.

He also was placed on sulphurous acid, which produced an immediate amelioration of the symptoms, but the skin proved very delicate and sensitive to the acid, and it was necessary repeatedly to suspend its use and adopt more soothing measures. There was also a considerable tendency to the development of boils in this case but the ultimate results were satisfactory.

CASE VIII. H. F., a large and rather fat German, fifty years old, appeared at Dr. Draper's Skin Clinic at the College of Physicians and Surgeons, on January 15th, 1877, for the relief of an eruption about the thighs and genitals. During my absence the following remedies were prescribed by one of the assistants, on the diagnosis of ordinary eczema, namely: two compound cathartic pills every second night, thirty grains of acetate of potassa, thrice daily, and the following ointment: R. olei cadini 3ij, pulv. camphoræ 3iss, ung. simplicis 3iss, glycerine 3ss, M., to be well applied.

Two weeks after his first visit I saw him, and he reported that there had been no relief to the terrific itching which had so long distressed him. I then learned that the eruption was of several years duration, and had never yielded to any treatment, although he had been constantly under medical care.

His history is as follows : for ten or twelve years he has had chafing at the crotch during the hot weather, it going away with or without treatment on the approach of cooler weather (during about the same length of time he has become much more fleshy than previously). The present eruption did not begin, as the preceding, with warm weather, but, after the chafing of warm weather had ceased, in October, 1876, and increased instead of diminishing with the advent of cooler weather. At this date he first noticed an eruption on the upper part of the thighs, which gradually increased in severity under treatment until the date of his visit. The itching which he had endured he described as terrible, entirely depriving him of sleep; he would frequently get up in the middle of the night and walk several miles, and the parts bore testimony to his sufferings in the inflamed and irritated surface caused by his continual frictions.

When first seen the eruption resembled that in the cases already described, in many important particulars, but also presented points of difference. Both thighs at their upper and inner surface, to the crotch, were the seat of a red eruption, the outer portions more elevated than the inner, and the margins very well defined, and ended abruptly in healthy skin; there was no gradual shading into healthy tissue as in eczema. Around the outside of the principal portion were several smaller spots of disease of various sizes, from that of a pin's head to a third of an inch in diameter ; at late periods of the case there were more of these flat, out-lying papules, which I have recorded as existing in many of the other cases. The color of the affected surfaces was of a rather dusky red, the outer portions of a higher color than those toward the center ; the surfaces were moist, but this was largely from perspiration, as the surface could hardly be called a weeping one as in moist eczema. The sides of the scrotum were red and itchy. He also had chronic eczema on other parts of the body, behind the ears and on the hands.

The scales, scraped from the surface of the thighs, were examined and found to contain both mycelium and spores of a parasite abundantly, and the patient was placed upon the free

external use of sulphurous acid. At the next visit, one week later, February 5th, I recorded that there had been a very manifest change in the appearance of the eruption, it had lost much of the elevated distinctness of its border, and, while it had been spreading rapidly before treatment, all advance had been arrested completely. But the statements of the patient afforded the most satisfactory proof of the correctness of the diagnosis. As before stated, he had not slept for more than two months previous to his visit; that night, after a thorough application of the sulphurous acid, he rested, sleeping all night, and had continued to experience the same relief up to the time of the note at the second visit.

To conclude the history of this case, he continued to improve week by week as my repeated notes show, until on March 5th, the marginated appearance was about gone, there was only a moderate redness of the parts, and no itching. On April 16th hardly any trace of the former difficulty remained. I have seen him on repeated occasions since, even during the present month of August, and he remains entirely free from his eruption; moreover, this summer he has not even experienced the chafing which distressed him during previous warm seasons. From first to last he used only the sulphurous acid, no other remedy was necessary, and at no time was there any irritation of the skin requiring its cessation, as in several of the other cases.

Inasmuch as there was some little difference of opinion among some gentlemen who saw this case, I examined the scales from the surface several times, always with the result of finding more or less of the parasitic elements, until they had been removed by treatment. I also submitted some of the scales to my friend Dr. Heitzmann, who agreed with me in the existence of the parasite, and also as to the nature of the disease.

CASE IX. Rev. Mr. B., aged about 40, has for several years suffered more or less from an eruption about the thighs and genitals, which has caused him to scratch much of the time, or rather has given an uneasy sensation which calls imperatively for scratching. On the inside of the right thigh was

seen a reddish patch, three or four inches in diameter, bounded by an irregularly curved border, more reddened than the rest of the eruption, sharply lined toward the healthy tissue, the margin being decidedly more elevated than the central portion of the patch. On the left thigh, where the scrotum rested, was another smaller patch, possessing equally distinct characteristics. The surfaces were slightly scaly and on scraping them a fungus was found by the microscope to be present in a very easily appreciable amount. I find it recorded that the parasite was not seen when first looked for, until the scales had been soaked a little while in liquor potassæ and glycerine.

CASE X. W. E., aged 33, said that two months previous to his visit to me an eruption developed on the inside of the left thigh, which "looked like ringworm," was circular, red, slightly elevated, and itchy. It had continued to increase in size, giving much disturbance, until he was sent to me for treatment. When first seen there was considerable artificial eruption mingled with the parasite disease, which former had been caused by a bi-chloride of mercury wash which had previously been advised by another physician. There was still, however, sufficient of the marginated appearance already described to warrant the diagnosis, and a microscopic examination of the scales demonstrated a parasite.

The case was treated for a while as one of ordinary eczema of these parts, because of the amount of irritation present, and at a later date the sulphurous acid was employed as in the other cases. One month after his first visit, a small circular ringworm developed on the inside of the right thigh, red and slightly elevated; this, he says, corresponded very closely with those which first appeared.

CASE XI. Mr. C. S. D., aged 47, was seen recently, and but once, and the results of treatment are not yet known. About a year since he noticed an itching behind, about the anus, and three or four months ago the region of the scrotum and thigh began to give him trouble. He has also an eczema of the palms which has existed four years, and at times given him great annoyance.

Examination showed the following state of the parts. Around

the arms a brownish, slightly roughened patch was seen, on both sides of the fold between the buttocks, limited externally by a distinctly drawn line of redder surface, which is slightly elevated and contrasts strongly with both the healthy skin and the enclosed brownish-yellow surface. On the left thigh, occupying a location corresponding to the place of contact of the scrotum, is a reddened surface of simple eczema, slightly moist, and without the marginated appearance; indeed, with the center of the patch more markedly affected than the periphery, a clinical sign, as we shall see, of some importance, pointing to an eczematous rather than a parasitic disease.

In this case also the parasite was found in the scales scraped from the region of the anus, upon careful microscopic examination, both spores and short mycelium. Sulphurous acid was ordered to the eruption about the anus, and other measures for the eczema existing elsewhere.

CASE XII. A. B., a German woman, aged 36 years, was seen by me at the request of Dr. Hanks, in his room at the Demilt Dispensary, January 20th, 1877, and he kindly gave me the following notes of the case:—She had come to Dr. H. in August, 1876, for “an exceedingly troublesome and constant itching about the front passage, which had existed for six months or more. She was a stout, well-nourished woman, cleanly in her habits and person. On examination there was found an eruption covering the integument of the labia externa, perineum, and around the anus, showing frequent marks of the finger nails. The disease seemed to be very superficial, and the line of separation between healthy and unhealthy parts very marked. She was given benzoated oxide of zinc ointment with oil of cade, which gave no improvement, using also a vaginal wash of alum and chlorate of potash. An ointment of chloral and camphor, prescribed later, gave relief to the itching whenever applied, but at the end of several months the disease was about the same.”

When I saw her, January 20th, the labia and to a slight extent the sides of the thigh, also the perineum, and the region of the anus were the seat of an eruption resembling the other cases of eczeina marginatum here described. The area of dis-

ease was bounded by a very distinct margin, slightly raised, of a tolerably active red color, while within the surface was more of a yellowish-brown color, and not elevated as at the margin. The eruption extended around the anus, and as in the other cases the lines on the opposing soft parts of the buttocks corresponded exactly with each other in shape and contour.

I regret very much that the scales were not examined microscopically, but the clinical appearances were such that there was no doubt in my mind as to the parasitic nature of the eruption, and I therefore advised the free local use of sulphurous acid. Two weeks from that visit Dr. Hanks reports that the case was nearly well, and that she remained so, except around the anus, until a month or two ago, when she again complained; this time she had a crop of little boils, and more or less itching around the anus.

It is not my intention at the present time to attempt a complete study of this disease, with reference to the work of others; but I wish to bring forward these cases to illustrate the subject in some of its features as occurring in this country, for, unless familiar with it, the comparatively mild cases occurring here may escape attention, when they fail to present the severe features depicted by Hebra and described by others. I may add, that the cases here detailed do not constitute my entire experience in the disease, for each year I meet with a number of cases of it in public practice, of which I have no notes, and some of my cases in private practice may have been overlooked and I have the notes of a number of cases which I saw in the practice of the late Dr. H. D. Bulkley. The eruption is, undoubtedly, a somewhat rare one, but not nearly so rare, I believe, as some have thought it to be.

DIAGNOSIS.—The only lesions which could be mistaken for *tinea trichophytina cruris*, the mis-called eczema marginatum, are eczema, intertrigo, and a serpiginous syphilitic derm. The chief difficulty, of course, lies in the differentiation between simple eczema, or intertrigo, and the parasitic eruption, for the serpiginous papular eruption of syphilis needs only to be borne in mind, in this connection, to enable one to exclude it in any given case, with measurable ease. The microscope is,

undoubtedly, of the highest value in the diagnosis ; but oftentimes the disease has been so altered by treatment, that the parasitic elements can no longer be recognized, or the microscope may not be accessible, and, in any case, dependence must be placed largely upon clinical features.

In my experience, the itching in this eruption is far out of proportion to its apparent extent and severity ; a patch which would be thought to give but little annoyance, will drive the patient almost frantic in his restrained desire to scratch ; moreover, scratching and rubbing does not appear to give the relief afforded by the same in eczema, the tickling returns sooner, and is less completely removed by mechanical irritation. Eczema about these parts generally attacks the scrotum more severely than the thighs, and is more commonly attended with thickening of tissues in the former ; whereas, in the cases of tinea of this region, when the penis or scrotum are involved, there is little or no thickening, except, perhaps, to a very moderate degree on the well defined margin ; and the tendency of the parasitic disease is to attack the thighs far more than the penis or scrotum.

In eczema of the genito-crural region, as in eczema elsewhere, the tendency to recovery is from without inwards, toward the centre of the patch, whereas in the parasitic eruption the centre always tends to clear up first, although there may appear new developments within the healed area. Eczema shades off in many instances almost imperceptibly into the surrounding healthy skin, while in the disease under consideration, the sharply defined border, oftentimes quite perceptibly raised, has a characteristic appearance which, when once seen and clearly recognized, may be looked for and observed in all cases of tinea cruris which have not been too much altered by treatment. The dirty yellowish-brown color of the inner portions which have been passed over by the disease, are peculiar to the eruption as distinguished from eczema.

It is granted, of course, that in individual cases the element of eczema so far predominates that the correct diagnosis may be entirely impossible for a season, even to the practiced eye.

Thus, in Case III of our series, when the patient first came under observation, all the features of the eruption were those of an ordinary, very greatly aggravated case of common eczema of all this region; and the disease yielded, up to a certain point, to remedies directed against the eczema alone; and it was not until two months and a half after his first visit, when all the acute symptoms had subsided, and he considered himself about well, that the parasitic element was discovered. In this case, however, I believe that the tinea cruris was the original trouble which had pestered him for years, at times causing him to get up a severe eczema by scratching.

What is true in differential diagnosis of this eruption from eczema, is more especially true between it and erythema, and the features need not be repeated for that disease.

In regard to the use of the microscope in studying cases of this disease, I do not think that the discovery of a vegetable parasite in the scales is always as easy a matter as it has been represented to be, nor should we, because we fail to find them in any one or two specimens scraped promiscuously from the affected surface, deny at once the parasitic nature of a case. That particular portion may be free from active vegetating elements, and yet contain seeds enough to cause it to break out again at a later period; also, we may not scrape deep enough, the outer layers in which it luxuriates most favorably may have been removed by treatment or by the cleanliness of the patient; or, again, the inflammatory phenomena may be so severe as to obscure the vision of the parasite, this is especially noticed by Kaposi.¹ This writer also gives, as far as I know, the only representation of the parasite growing in the deeper layers of the epidermis, even among the nucleated cells of the rete.

Neumann says,² "In an earlier stage of the disease, the fungus is almost always demonstrable; in inveterate cases it is absent as a rule." "In those cases where the infiltration is considerable, and the skin covered with scales and crusts, I

1. Hebra—Lehrbuch der Hautkrankheiten. Vol. II., p. 641.

2. Neumann—Lehrbuch der Hautkrankheiten. 4th edit. Vienna, 1876. p. 630.

could rarely find anything else besides micrococcus and bacterium, with which the epidermal cells were densely packed. It appears that in this, as in all skin diseases dependent on fungus, and having thereby much dried blood and pus, the mycelium gradually perishes, and the cells of bacterium and micrococcus gradually preponderate, from which no higher forms are ever developed."

In the majority of cases, however, presenting clearly the clinical features detailed in this paper, the parasite can be found and demonstrated, if sufficient care and patience is exercised. It may, perhaps, be necessary to allow the disease to remain for a season without treatment to allow the free growth of the mycelium in the outer layers of the epidermis. There is always danger of confounding external elements of fungus with those belonging to the specimen under consideration, and great care is necessary to avoid this. It is also well to bear in mind that the edges of epithelial cells often resemble mycelium, and that fat globules have repeatedly been mistaken for the spores of a fungus.

ETIOLOGY.—This leads to a consideration of the etiology of the disease. There is no doubt in my mind that it is frequently a combination of an eczema, pure and simple, or of an intertrigo, and a vegetable parasitic disease, in most instances the tinea trichophytina. I say in most instances, for I have seen cases of tinea versicolor, where the eruption extended as far down as the genital region, and where there were lesions resembling much the so-called eczema marginatum; and in Case III., before alluded to, the parasite appeared to be composed of finer elements than the trichophyton, and the co-incident occurrence of the parasitic disease of the ear, would point to the presence of the aspergillus in this case. I have once observed favus on the penis and scrotum, but it did not take the forms described in this paper, though I do not see why, if the person is a suitable subject, with an eczematous diathesis or tendency, this parasite might not luxuriate in the genital region, and give rise to the compound disease under consideration.

In a number of the cases here detailed, eczema existed else-

where on the patient, but, on the other hand, in case V., where the very general *tinea circinata* covered almost the whole body, those portions about the genital region partook of the characters of *eczema marginatum* without there being any eczematous feature elsewhere; the favoring elements of heat and moisture in the parts affected appear to be the most important factors in the disease, besides the parasite.

It is, therefore, difficult to determine in every case how far the parasitic disease, and how far the *eczema* or *intertrigo* are to blame for the existing lesion, it is difficult to say which came on the stage first; I am inclined to believe that very frequently the parasite plays the second part in the programme, but soon becomes a prime factor—that is, that there is first an *eczema* or *intertrigo*, or a congested and moist condition of the parts upon which the fungus finds its most congenial nest where it vegetates and soon obtains a foot-hold, which nothing that does not exercise a directly destructive influence on its life can remove. Thus, in Case I., the patient had worn a suspensory bandage for a varicocele for several years, from which there had long been more or less chafing, but no serious trouble occurred until the advent of the parasite, a month before his visit. In Case VIII., the patient had had chafing in the crotch for ten or twelve years every summer; this had, however, always disappeared on the advent of cold weather; but when the vegetable parasite found lodgment here, on this appropriate soil, it remained until destroyed by a parasiticide. On the other hand, in a number of the cases, the eruption had persisted for years with aggravations, the disease being kept in check by cleanliness or treatment, or both, the parasite existing there all the time as a permanent cause, as in Case III.; in such cases the variation in the effect is dependent upon the state of the general health, congestion of the hemorrhoidal vessels, heat, exercise, etc.

It will be thus seen how inappropriate is the term *eczema marginatum*, while the addition of the adjective *parasitarium* but heightens the difficulty. It is no more appropriate to speak of a parasitic *eczema* than it is to speak of a syphilitic *eczema*; *eczema* cannot be caused by a parasite or by syphilis.

PROGNOSIS.—I do not think that the prognosis of this disease, in this country, is anything like as serious as it has been spoken of by those who have written of it as observed elsewhere. Our cases are milder and certainly do yield to intelligent treatment in a manner which is generally highly satisfactory to the physician and patient. There is need of caution, however, lest the treatment be discontinued too soon, for relapses will happen unless the disease is thoroughly eradicated. Nor need we wonder at this, considering the extreme minuteness of the germinating spores of the fungus and the possibility, nay probability, of one or more of them being overlooked, perhaps remaining on articles of clothing, giving thus, in reality, a new infection, a new case. Caution should be exercised, therefore, in pronouncing the patient cured before he has remained some months free from eruption.

It must be borne in mind when comparing these cases with the severe ones alluded to by Hebra, McCall Anderson, Fox, and others, that they were all but two of them in private practice, and those two were of very cleanly habits; when comparing the eruption with the severe forms observed in the East, as the Chinese, Burmese ringworm, etc., we recall that the element of a warm climate certainly has an effect in the development of these affections (as several of my cases were decidedly worse in warm weather), and that diseases of the skin as well as other diseases, certainly do present differences of type in different countries, although some have tried to insist that they do not.¹

TREATMENT.—The cases here given were treated almost exclusively by the free external use of sulphurous acid, as strong as could be procured and used, and, judging from the histories given, nothing more could be desired. In every case it gave immediate relief to the itching, and produced a marked improvement in the appearance, and in some instances it was the only remedy employed from beginning to end, and sufficed entirely to remove the disease.

Some care is necessary in order to procure and use sulphur-

1. Dr. G. Thin on Eczema Marginatum, London Practitioner, July, 1875, and Jan. 1877.

ons acid strong enough. I have often seen recommendations of writers to employ it diluted in various strengths, but seldom have I found it necessary to weaken it any, even for delicate skins, while I constantly see it fail in its action from being too weak. I generally advise patients to buy an unopened bottle of Squibb's sulphurous acid, to open it carefully and fill a one ounce bottle, cork again quickly, and make all the applications from the smaller bottle, which is to be refilled as often as required. I am convinced that much of the sulphurous acid retailed in the shops is absolutely worthless, as the gas either has evaporated, leaving simply the distilled water, or the sulphurous acid held in solution in the water has partially undergone oxidation, returning to sulphuric acid in solution, which, in place of being beneficial, would be prejudicial to such an eruption as the one under consideration. It is necessary, then, to use freshly made acid which has been kept tightly corked, and as this has been my habit for several years, I seldom find difficulty in obtaining the results I desire from it in vegetable parasitic affections of the skin.

In regard to the mode and frequency of its use, I advise the parts to be well saturated with it two or three times a day, there is no harm in applying it much more frequently if it does not inflame the skin, indeed many patients resort to the application of it whenever the itching calls attention to the disease. When it appears to cause irritation it is to be suspended, and such remedies as zinc ointment, or a calamine lotion are to be employed for a time, and on returning to the sulphurous acid, a new and, if practicable, an unopened package, fresh from the manufacturer, should be employed, as possibly the irritation may have been caused by the *sulphuric acid*, developed in the former specimen.

I need hardly mention other methods of treatment which are familiar to all. Anderson says he has had best results from the bi-chloride of mercury in solution (gr. ij. ad. $\frac{3}{4}$ j.) ; others recommend ointments of turpeth mineral (gr. xv. ad. $\frac{3}{4}$ j.), or dilute citrine ointment, as also oil of cade, oleum rusci, etc. Goa powder, or poh di bahia, or its derivative crysophanic acid, is a paraciticide of value, especially in this form of disease,

and is highly recommended by some. Hebra and Neumann treat this disease much as they would ordinary eczema of these parts, although recognizing its parasitic nature ; this I believe to be a great error, for while vigorous treatment may succeed in removing the disease mechanically, the results are far less rapid and satisfactory, in my experience, than those of a well directed anti-parasitic plan, and, on the other hand, I may say that most of my patients had been under judicious treatment for eczema with little or no avail, until the real nature of the affection was discovered, and it treated in the method described.

Hebra¹ recommends his modified Wilkinson's ointment (*R. sulph. flor. picis liquidæ, aa ʒiiij. saponis viridis, unguent. simpl. aa ʒvi. cretæ prep. ʒij. M.*) to be rubbed in with a brush morning and night for six days, and the parts kept covered with flannel. The surface is not to be washed during this time, nor for three days afterwards ; a bath is then taken. This treatment generally confines the patient to the house, or even to the bed ; when this cannot be done Hebra states that any other treatment must be mainly palliative, and must last for months. In the use of the sulphurous acid I have never seen the patient confined to bed, the treatment is measured generally by days or at least weeks, and not by months.

I have sometimes obtained considerable assistance from an occasional sulphur vapor bath, which, of course, is but a part of the sulphurous acid treatment, in the one instance the sulphur fumes being dissolved in water, in the other they are directly applied to the skin. I have not used sulphur otherwise, as in ointment, nor should I be disposed to try it from what I know of the disease.

= (1.) Hebra—Lehrbuch der Hautkrankheiten—Erlangen 1874—Zweite Aufl. p. 493.

ON SURGICAL USES OF THE STRONG ELASTIC
BANDAGE¹ OTHER THAN HÆMOSTATIC.

BY HENRY A. MARTIN, M. D., Bv'T LT. COL. AND LATE
SURGEON U. S. VOL'S.

At the meeting of the American Medical Association in your city last June, I made some extemporaneous remarks on the above subject. At the request of the Committee on Publication I have prepared a written abstract of those remarks, which may appear in the forthcoming volume of the Transactions. I have, however, been so often urged to publish a paper on the same subject for the immediate information of the profession, and the interest which has been manifested both at the meeting and since that time in numerous letters has been so unmistakable, that I gladly acquiesce, and offer the paper for your acceptance as a very slight acknowledgment of courtesy received individually at your hands, and generally at those of the whole profession and people of Chicago.

For over twenty-five years I have made use of a strong bandage of India rubber, for the treatment and cure of all ulcers of the lower extremity of a non-specific character,

1. The bandage I use resembles Esmarch's. I, however, call it the strong elastic bandage, for I used it continually very many years before the discovery which has immortalized an already illustrious name. I did this without the slightest notion that by such a bandage the deep arterial circulation of a limb could be entirely controlled, indeed with a very decided theoretical conviction that it could *not*, and therefore have no claim whatever to Esmarch's discovery. Many years ago I twice recommended the elastic bandage to surgeons about to amputate legs, as a substitute for the common roller bandage often used to expel blood from a limb *before* and so save it for the patient *after* amputation, but my suggestion was disregarded. That is the nearest I ever came to making Esmarch's great discovery.

coming at all within the category of curable, and as a most efficient aid to treatment and palliation in those of a specific character and those incapable of perfect cure by any method of treatment; and I may here say that a very large proportion of ulcers of the lower extremities practically incurable by other methods are capable of easy and permanent cure by this.

The bandage which I use in the treatment of ulcers of the leg, is made of what is technically called "pure rubber," i. e., the best "Para" rubber, combined with the smallest possible mixture of sulphur, and subjected to the minimum of heat necessary to "cure" the gum and ensure it from the destructive changes which rapidly take place in bandages made of

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1. I use such a bandage in the treatment palliative and curative of many other diseases and injuries, principally of the lower extremities; but of these I will, at the present time, give only a partial list, reserving a detailed account of its application to such cases for a future paper. The present writing will refer exclusively to the treatment of ulcers of the lower extremity. The principal cases, other than these, in which I have found such bandages eminently useful are, (and I mention them in the order of their importance, and the perfect applicability of this method to their treatment); (1.) Acute and chronic synovitis and consequent effusion in the joints, particularly of the knee, ankle, and elbow. (2.) Subluxations of those joints to which the bandage can be applied, both in their acute and chronic stages. (3.) Morbid effusion in the bursa mucosa, especially, after evacuation by aspiration, of the bursa developed over the patellæ, and known as "housemaid's-knee," and by other names. (4.) Cœdema and anasarca, whether due to local or general causes, and occurring in either the lower or upper extremity, but chiefly, of course, the former. (5.) As an admirable palliative, and even in some instances, to a certain degree, means of curing varicose veins of the lower extremity, occurring either with or without ulcers. (6.) As a most efficient adjunct to treatment of erysipelas of either the legs or arms, whether traumatic or idiopathic, and, in very many cases, capable, without other means, of entirely curing, and, as it were, *extinguishing* that so called "*ignis sancti Antonii*." (7.) As a very valuable adjunct to the treatment of many cutaneous diseases, particularly when affecting the lower extremity, and as, without any other means whatever, local or general, absolutely and completely curative of many of these affections and their consequences. (8.) As a very useful surgical dressing after dislocation of any joint to which it can be applied, but particularly those of the knee elbow and ankle. (9.) As an extremely useful surgical dressing for some cases of that form of lesion entitled "*green-stick-fracture*," in which a

pure uncured caoutchouc. The bandage is ten and a half ($10\frac{1}{2}$) feet in length; three (3) inches wide, and of the thickness of no. twenty-one (21) of Stub's wire gauge. In about two inches of one end a piece of strong linen cloth is inserted. To this is strongly sewed a stout double tape of eighteen (18) inches in length. It is important that the edges of the bandages should be perfectly even, and this can only be accomplished by cutting them by machinery. The bandages I now use, are, with the single exception of attaching the tapes, prepared at the factory in which the sheet rubber is manufactured. In my first experiments, I attempted to make the bandages by cutting them, with strong, sharp shears, from the rubber sheet; but in this way it was impossible to produce

gradual, continually exercised, gentle pressure accomplishes that perfect "reduction" which cannot always be accomplished at once even by painful and unduly violent manipulation. Also in cases of deformity of bones from improper co-apтation of fracture, where the "callus" is too firm to admit of immediate bending, this sort of bandage, properly applied, has been found quite capable, by the constant, steady pressure which it exercises, of correcting deformity in fractured bones, even so long after injury as to be generally supposed capable of such correction by no means save that of re-fracture. (10.) As a most useful appliance eminently palliative, and sometimes even to a great degree rapidly and completely curative of injury of the ligamentous and other tissues of joints, resulting from contusion or other injury, or from relaxation of ligaments from disease. (11.) As a most efficient palliative of, and often decided means of remedying chronic and acute inflammation of and about the joints or other parts of a limb; in phlebitis; as a preventive when abscess is threatened, or, in such cases, when too far advanced for prevention, as a means to hasten forward the process of suppuration. This enumeration of cases in which the strong elastic bandage has been found, *in actual practice*, very decidedly useful, although somewhat extended is, by no means, exhaustive. When the intelligent practitioner becomes familiar with, and reflects upon, the phenomena observed after the bandage has been applied; the effect of continuous, gentle, equable pressure, of perfect exclusion from air and light, of the constant moisture and equal warmth of the part involved in the bandage, of the constant support afforded to distended and weakened vessels, the relief of congestions by the mechanical expulsion of blood from the overloaded veins and capillaries, he will have little difficulty in perceiving the value of this method of treatment in the cases I have mentioned, and many others. I shall, at some future time, write a paper or two based on my personal experience in the use of the bandage for other cases besides those of ulcers of the lower extremity. At present I only wish to intimate what some of these cases are.

a bandage that would wear for any great length of time. If there is the slightest notch in the edge, at that point, sooner or later, generally very soon, the bandage will tear, and become useless, while the machine-cut, perfectly even-edged bandage will bear continued and indefinitely repeated traction without any danger of such an accident. It is really astonishing how long such a bandage will wear. Many of my patients are wearing those, which have been in constant daily use for two, three, and even four years; and I have cured several successive poor patients with bandages which still remain serviceable. The length and width stated are those I have found suited to the vast majority of cases. In a few instances of extraordinary size of a limb, a width of three and a half, or even four inches, and two or three feet of additional length may be desirable. In cases where the leg is very slender, the length I mention will be more than is needed, but the superfluous bandage may be wound round the leg under the knee, or, of course, cut off to suit the exact requirements of the case.

I need not relate how I gradually came to the conclusion that such a bandage as I have described, *without any other means or appliance whatever*, is all that is necessary for the perfect and permanent cure of all curable non-specific ulcers of the leg. Such is the fact, and I have no hesitation whatever in asserting that all former other methods of treating such ulcers may and should be abandoned entirely, no matter how illustrious their authors. I dare say such an assertion from an obscure private practitioner may appear presumptuous, but it is very deliberately made. For twenty-five years I have been constantly observing cases of every variety of ulcer of the leg under treatment by the strong elastic bandage. During those years, I have had ample opportunity to observe the results of other methods of treatment; and before I fully adopted my present practice, had frequent and full personal experience of the infinite trouble to the surgeon, tediousness of duration of treatment, and insecurity and want of permanence of result from the treatment of such cases by Baynton's and other familiar methods. I am fully aware of the importance and value of the

means I advocate, and very solicitous that the profession should, at any rate, test the truth of what I assert by the practical use of the bandage. I wish that the announcement of this method of treatment might have the advantage of coming from one of those recognized authorities and magnates of the profession, who have forced so many worthless methods into practice, simply because they were *their* methods. "Truth is great and *must* prevail." It is a sweet consolation to believe this axiom, but the highest and best truths, coming from obscure and unknown sources, are very apt to be disregarded, while error and fallacy, backed by a mighty name, are eagerly hailed and adopted. The method I advocate is so easily tested, a single case of ulcer of the leg carefully observed will demonstrate its advantages clearly and perfectly, and as people with uncured ulcers of the leg abound everywhere, I cannot help hoping that, although I am unknown in every way as an authority, the method will be fairly tried, and win, by its intrinsic and evident merit, a permanent place in surgical practice.

The bandage is to be applied by taking one turn just above the ankle, then one over the instep, round the sole of the foot, then round the ankle and, spirally, up over the leg, to the knee, at which point what remains unapplied should be wound round the limb, and the tapes firmly tied. Each turn should overlap that before it from $\frac{1}{2}$ to $\frac{3}{4}$ of an inch. No skill whatever is requisite, as the bandage is simply carried round and round, without any of the nice reduplication which is necessary for the proper and useful application of the ordinary bandage. The best time to apply it is the first thing in the morning, before the veins of the leg have become distended from the impeded column of blood. The very best way is for the patient to apply it in bed, before assuming the upright position. If, in these circumstances, the bandage is applied with just enough snugness not to slip down, it will, at once, on the patient standing up, become of exactly the right degree of closeness of application. This is all that need be said in regard to the application of the bandage. Thus applied, it will remain unmoved during the whole day, no mat-

ter how active and continual the exercise or labor of the patient. A theoretical objection to be met is that that portion of the foot below the bandage must become œdematous. Such certainly would be the effect, of an ordinary bandage, applied with sufficient tightness to be of any use, but the fact is, that no œdema follows the proper use of the rubber bandage. Indeed, in some cases of ulcer of the leg, a certain degree of œdema of the foot is found, due to the weakened and distended veins, and consequent impediment to the circulation. This œdema is rapidly removed by the use of the strong elastic bandage. These facts are illustrative of the reasons why its application alone is so entirely sufficient for the best possible treatment of the varicose ulcer. That sort of ulcer and the œdema often accompanying it, are due to the too great quantity of blood in the limb. The bandage expels the superfluous blood, and while it supports the weakened walls of the distended veins, does not stop, but really facilitates the circulation through them. The pressure exercised by the bandage is a very efficient means towards the absorption of interstitial deposits, serous or fibrinous, effused among the tissues of ulcerated legs.

The patient wears the bandage all day. At bed-time it is to be removed. When this is done, its inner surface and the skin, which it had covered, will be found bathed in profuse sweat; this is to be wiped from the limb with a dry cloth. A bit or bits of thin, soft, old linen, moistened with castor or sweet oil, is to be laid on the ulcerated spots, and kept in place by a few turns of cotton roller bandage. This is the treatment, with recumbent position all night, and the bandage and the erect position all day. The bandage should be wiped with a wet sponge, and hung up to dry, or, of course, it may be wiped dry at once, and rolled up, with the tapes inside, for use on the following morning. This is the whole treatment I have employed for the permanent and solid cure of many hundreds of ulcerated legs, during the past twenty-five years. Now and then, a peculiarly diseased condition of the skin has led me to recommend a daily or less frequent washing with Packer's

tar soap¹, and occasionally a carbolized, or other solution where there was an intensely itching condition of the surface. As I am writing for physicians, I need not enter into details of treatment of exceptional cases. What is required by the peculiar complications of certain cases will suggest itself to the intelligent practitioner. For ulcer of the leg, *uncomplicated* by other disease of the skin, the bandage alone is all that is needed.

During the first two or even three weeks that the bandage is used, a more or less numerous crop of papules will appear on the skin to which it is applied. These run, rapidly, into suppuration, discharge their contents and disappear. Generally they are small, but occasionally larger, and now and then of the character of small boils. Whatever their size or number, the best possible treatment for their resolution is by the bandage. This is practically the best possible poultice. In a wonderfully short time these little pustules run their course in the warm moist atmosphere under the bandage. Each of these pimples or pustules represents an obstructed follicle or duct. After they have ceased to appear, the skin becomes and remains entirely unobstructed, no matter how long the bandage is worn. A few patients cannot, or *think* they cannot bear the rubber next the skin. In many hundreds of cases, I have met but three or four in whom there was a want of perfect and easy tolerance. In these exceptional cases I was obliged to wind the limb with a linen bandage, over which I applied the rubber. Only one of these exceptional cases was of ulcer of the leg; the others were cases in which the bandage was applied for disease or result of injury of the knee joint. I have said that the strong elastic bandage *alone* is all that is needed for the successful treatment of all non-specific

1. I have found "tar soap," which contains a large amount of tar, properly saponified, of very great value in certain diseased conditions of the skin, and rectal and vaginal mucous membranes. A great deal, however of so-called tar soap is so merely in name, and intended for toilet use. I formerly used the Hamburg Thev Seife, which answers very well, but is absurdly expensive. For two or three years, I have made use exclusively of Packer's tar soap, an American product, far superior to even that from Hamburg, and sold at a very reasonable price.

ulcers of the lower extremity. I repeat it with the utmost confidence based on a very large and long experience. One and the chief reason that I have so long forbore to communicate to the profession a method which I consider so valuable was that I wished to accumulate such a number and variety of cases in which it had been successfully employed as would leave no room for doubt, and, being quite without the vast facilities afforded by hospital practice, such accumulation was a gradual process.¹ The form of ulcer which yields most readily; with a rapidity which is sometimes really wonderful, is that most common of all, the varicose ulcer. The reasons for this are obvious. That sort of ulcer is caused and maintained by malnutrition of the skin from the engorged, impeded circulation, which is at once relieved by the bandage. In those cases caused by a languor and imperfection of circulation in the legs, from deficiency in quality or quantity of blood, or feebleness of the heart's action, the bandage accomplishes a cure by the warmth and moisture it secures, favoring the circulation in the entaneous capillaries and inducing a *removal* of blood to the surface. In these cases, familiar to all surgeons for their obstinate resistance to treatment and the imperfection and unreliability of their cicatrization, the ulcers called by Hippocrates, and the classic surgeons "Chironian"²—round or

1. During most of this time, although I have spoken very freely to physicians of my use of these bandages and furnished them with opportunity to test their usefulness, and, in this way, the method has become widely known, I have never hitherto published any of the results of my experience. I have never, in a pretty extensive reading of periodical medical literature, met with any account of the use of the strong elastic bandage in the way I recommend. In the London *Practitioner* for May, 1876, there is a very brief paper entitled "Use of blisters in chronic ulcers," by S. D. Turney, of Circleville, Ohio. It has nothing to do with blisters, but *is* a very interesting record of the very rapid cure of five or six bad ulcerated legs by applying Esmarch's bandage every day as tightly as could be borne by the patient, for a very *short* time. So far as I know, the paper has attracted no notice or comment, but it notes an important fact, and I refer the reader to it, as, to a certain extent, corroborative of what I have written.

2. *Chironian Ulcer*, So called because so difficult of cure that Chiron (who taught Apollo fiddling and physic) alone, or one his equal, might cure it.

roundish, with perpendicular sides, as if punched out of the whole thickness of the much-thickened skin, with hard, white, scathing, often almost cartilaginous edges, yield to the bandage and to that alone, and with far more perfect and stable results than by other methods of treatment, but they are cured much more slowly than any other variety of non-specific ulcer. Before anything like *reliable* cicatrization of these ulcers can occur, the hard edges must be entirely got rid of. The constant pressure of the strong elastic bandage is an efficient agent in promoting the absorption of this impediment to cure; but it is a slow process. In such cases I recommend that the patient should wear the bandage night as well as day, while in the very large class of ulcers caused and maintained by a varicose condition of the veins, I direct the bandage to be worn only during the day, as before stated.

In, perhaps, the worst *curable* case I ever saw of this inveterate sort of ulcer, in an old, feeble, ill-nurtured patient who had been, off and on, under treatment for nearly nine years, whose ulcer had been nominally "cured" again and again, and in each instance, almost immediately on resuming labor, the cicatrix had broken down, I used the bandage alone as a test case. Of course I could have much expedited the cure by removing the gristly border of the ulcer by caustic, or the knife, but I depended on the bandage only, and in four months, during which the patient continued to labor without any intermission, his ulcer was solidly and well healed, and has now, for nearly five years, remained so. I may say here that not only with this method is the patient *allowed* to continue his ordinary avocations, however laborious, but is much better able to work while wearing the bandage than he would be without it. This is particularly to be noticed in all varicose conditions of the leg. I have had many cases in which it was only by wearing such a bandage that a patient could do his daily work. I shall refer to this point again in a future paper, in which I hope to demonstrate the extreme value of these bandages as a palliative in cases of varicose veins of the leg, *uncomplicated* with ulcer. I am aware how hastily and roughly this paper has been thrown together, but I believe it

indicates pretty clearly my method of treating ulcers by the strong elastic bandages, and my perfect confidence in that method, and that is its entire end and object. If it attracts the notice of the profession, and leads to a practical approving of a method so easily tested, I shall have accomplished what I wished and intended. In another paper, prepared at the request of the publication committee of the American Medical Association, I have described six cases illustrative of results of treatment of a variety of ulcers, and other diseases and injuries. I suppose that paper may be published in due time, and to it I refer the reader. I would also say that I shall be very happy to answer any inquiry as to points connected with the subject on which my readers may wish to be informed.

27 Dudley street, Boston, October 1st, 1877.

Postscript.—Since my return from Chicago, and as a result of my remarks at the meeting there, I have received very numerous applications for bandages, and for the address of a dealer from whom they could be obtained. To meet the requirements of the profession I have made arrangements with Messrs. T. Metcalf & Co., 39 Tremont St., and Messrs. Leach & Greene, 1 Hamilton Place, Boston, who will, in future, have always on hand an ample supply of bandages for the leg, made under my direction and inspected by myself. These gentlemen will also keep on hand bandages of the exceptional length and breadth I have alluded to, and also the bandaging of which any required number of feet may be obtained for the very varying requirements for the different joints.

I find, on reviewing what I have written, that I have omitted to state that, after cure of varicose ulcer, many of my patients, whose occupations require much standing or walking, continue to wear the bandage, both for the relief of their varicose veins and as a preventive of a return of the ulcer. Other patients I recommend to resume the use of the bandage if there is any symptom of return of the ulcer, or if they are obliged to be much on foot.

A CONTRIBUTION TO LARYNGOLOGY.—TWO
CASES OF DISEASED ARYTENOID CAR-
TILAGE TREATED BY LOCAL
DEPLETION.

By E. CUTTER, M. D., Cambridge, Mass.

CASE I.—A middle aged lady, residing in Newton, Mass., complained of hoarseness, partial loss of voice, dysphagia, cough and throat distress. There was no difficulty in breathing. She was placed under the writer's charge, for examination and treatment, by Prof. Field; and, on inspection with the mirror, the larynx was found to be normal, except that there was a large, red, pear-shaped enlargement of the tip of the left arytenoid cartilage. The right cartilage was of normal size. The left was of the size of a cranberry, or more definitely, from $\frac{1}{2}$ to $\frac{2}{3}$ of an inch in diameter. To the touch it felt hard, but not stony, and was movable from side to side. The question of malignancy was raised, but not sustained by the rational signs. It was, therefore, concluded that the enlargement was not carcinomatous, but hypertrophic; and the subsequent history has sustained the conclusion, as ten years have now elapsed since the patient's recovery.

Satisfied as to the character of the growth, the next question was that of treatment. The writer had then never seen, heard nor read of such a case. The entire subject of laryngology was then in its infancy; and, as a consequence, having no guide, either from experience or history, the treatment was conducted on general principles.

Hypertrophy of the periarytenoid tissues, accompanied by congestion of the blood vessels, involves an enlarged and dilated condition of the capillaries, by blood accumulation, resulting in an altered condition of nutrition, the vessels being, as it were, paralyzed by mechanical distension. By dividing

the vessels they would be enabled to unload themselves of their contents and to contract to their normal caliber. Thus they should regain their tonicity and subsequently proceed to a better discharge of their functions. Whether this reasoning were right or wrong, it became really a part of the history of the case, as explaining the course that was pursued. A knife was specially constructed, by Messrs. Codman & Shurtleff, of stout, flattened steel wire. The end was sharpened, like a lancet, on both edges. Two inches from the distal extremity, it formed an angle of 120°. When in position, the flattening was lateral, so that the greatest strength of resistance was in the direction of the thrust. The operation of local depletion was practiced two or three times a week for two months, as follows: the patient was seated as in ordinary laryngoscopy, and the throat was illuminated by natural or artificial light. The parts being exposed to view by the laryngoscope, the special scarificator was then introduced, guided by the eye. Incisions were made freely over and into the substance of the swelling, until the hemorrhage amounted to a mouthful or more. The evacuation of the blood was followed by considerable relief to the local symptoms and subsidence of the enlargement, resulting in the complete relief of the patient.

Since this paper was written, Prof. Field has informed the writer, that the disease had not recurred, and the cure was permanent.

REMARKS.—The general tendency of medical opinion is against depletion ; but it is surely an error to desist from its use in chronic engorgements and infarctions. In the present instance, it not only did no harm, but was followed by the happiest results. It should be stated that no pus or serum was discharged, but only blood, and no abscess resulted. The writer has been in the habit of scarifying every local chronic congestion in the throat, and has never yet seen any reason to regret such a course, for incisions of this sort heal very readily, and result in relief from pain. They do good, apparently, by emptying engorged vessels, by relieving the semi-paralyzed condition of their walls, and by allowing them to resume their functions. In the condition of natural tonicity, a capillary will admit, at

a time, but one red blood corpuscle, though when congested, it may admit many. When long distended it ceases to respond to such external stimuli as the topical application in common use. It cannot contract, because it is weakened by distension. Divide the vessel, permit the escape of its contents and contraction becomes possible. Its distension removed, the vessel is enabled to perform its normal functions and becomes obedient to those natural laws of the body whereby tissue material is deposited and taken up, so that the symmetry of each organ is not altered.

CASE II.—Left arytenoid cartilage enlarged, solid and mobile. Sleep rendered impossible by a sensation of suffocation. Tracheotomy. Removal of tube. Death.

A medium-sized, robust Irishman, 24 years of age, complained of his throat. He had no pain, but suffered from a dry, irritating, convulsive cough, altered voice, dyspnoea, dysphagia, and complete suffocation on falling asleep. The only source to which he could ascribe the trouble was a severe cold contracted a month or more before consultation with the writer. The loss of sleep was the most prominent difficulty; for although he could fall asleep at any time, this condition would be soon disturbed by the sudden occurrence of a sense of complete suffocation, and the patient would be aroused by the efforts put forth to restore respiration.

His general health had not suffered much impairment. Phonation was peculiar, its tone being coarse, gruff and muffled. Inspiration was noisy; expiration noiseless. On laryngoscopic examination, the throat was found to be injected and reddened. Behind the tongue, on the left side, was a whitish globular mass, covered with thin mucous membrane, the tissue beneath resembling cartilage, while the surface was unbroken, smooth and even. This tumor was about as large as an ordinary marble. It was attached below and touched the posterior pharyngeal wall and the back part of the tongue, overhanging the larynx from the left side, so that it was difficult to see the vocal cords, which were found to be intact and normal. The tumor was mobile. When pressed upon, it would wobble

over onto the larynx and stop it as completely as if by a ball-valve.

The right arytenoid cartilage was normal; the left, lost in the tumor. Judging from appearances, after a careful examination, it was decided that the growth resulted from an enlargement of the arytenoid cartilage, and this opinion was confirmed by several other physicians who examined it. It was also thought to be carcinomatous, for the following reasons:

1. It so much resembled a case of schirrus of the skin that occurred in the practice of my late honored father, Dr. Benjamin Cutter. The patient I refer to was a married female, about 50 years of age, suffering from undoubted cancer of the uterus. Beneath the integument of the thorax and abdomen were ten or twelve hard, globular, whitish, movable bodies exactly resembling white marbles.

2. A case occurred in the writer's own practice where similar tumors were developed upon the scalp, which the patient called "horns," as they felt very much like the rudimentary horns of calves. After death it was found that they penetrated both tables of the skull, leaving, after removal, circular openings, extending to the dura mater, as clean cut as if made with a trephine.

In the way of treatment it was decided to try the effects of scarification, encouraged by the good results obtained in the first case. This was faithfully employed. But it was difficult to obtain a mouthful of blood at any sitting owing to the stony hardness and mobility of the tumor, all efforts proving a failure. As a result, the patient's general health began to fail. He grew weak, thin, and nervous from want of sleep, and, finally, could hardly keep awake long enough to permit of the scarification. But no sleep was possible for him, as the consequent and complete closure of his larynx would not permit of it. Fearing that this continual loss of sleep would result fatally, counsel was had, and it was decided to perform tracheotomy in order that the tumor might be allowed to remain at rest, some sleep be secured and a chance for recovery be eventually afforded by quieting the irritation of the larynx. The operation was done with immediate relief

and proved to be a critical one. The writer was over-ruled in the choice of an anæsthetic, believing, as he did, that ether would produce such a flooding of the mouth with the secretions of the salivary, parotid and other glands of the buccal cavity, that suffocation would result when insensibility occurred. The objection to the chloroform, however, was so strong that the patient was etherized, and what had been feared immediately resulted. Respiration and cardiac pulsation instantly ceased, and the body became as rigid as a cadaver. It became necessary to make the section of the skin, fascia, muscles, and cartilages of the trachea while feeling at the bottom of a well of blood, regardless of nicety of dissection and hemorrhage. A metal tube was soon inserted into the trachea and rapidly filled with blood. By means of an India rubber tube attached to a syringe bulb, the blood was removed and respiration reestablished. The patient rapidly recovered, lost his anxious countenance and enjoyed a quiet and refreshing sleep.

The effect upon the tumor of the artificial opening, was absolutely nil. While it did not increase, it certainly did not diminish in size. In order to obtain a change of air the patient subsequently removed to Ohio, and while there he consulted some one who told him that if he had been properly treated at first, he might have been cured. In accordance with the advice then given the tube was subsequently removed as useless ! In a short time the man choked to death.

Remarks. These two cases illustrate a common experience; of two patients similarly affected and similarly treated, one is relieved and the other not. Both were treated ten years ago. At the present time should I have occasion to treat a patient affected as in the last instance reported, it is probable that I would attempt to remove the growth, after tracheotomy, by the galvano-caustic wire.

BOSTON, MASS., 13 TEMPLE ST., JULY 31ST, 1877.

Translations.

THE TREATMENT OF THE ACUTE INFLAMMATIONS OF THE MIDDLE EAR.

BY DR. WEBER-LIEL.

[Translated from the Deutsche Zeitschrift für praktische Heilkunde. By Dr. F. C. Hors.]

The following remarks relate to an otological topic which is of especial interest to practicing physicians. This paper is principally written for the non-specialists.

Many mistakes are made in the treatment of those acute aural diseases which are so often met with, in the practice of every physician. These errors do not always arise from a lack of knowledge of well founded doctrines, but rather from the fact, that the doctrine of the acute aural affections, and especially of the acute inflammations of the middle ear, has not yet been brought into satisfactory shape. The experience of many years of special practice has led me to adopt a different view and treatment, in many points, of the diseases in question, as the teachings of the text-books of acute inflammation did not prove satisfactory to me. I beg to differ with the opinion of those who believe that the acute inflammation of the ear always shows the same character.

They are not always the simple idiopathic affections for which the same remedies have the same effects. Undoubtedly all my professional colleagues have had the sad experience that in some cases the inflammation took a most pernicious course; the earache did not abate, and the hearing power was completely destroyed, although hot water was instilled into the ear with the utmost care, as frequently as recommended; although leeches were repeatedly applied in front and back of the ear, and in spite of cold applications, air douche, fomentation, gargles, and paracentesis of the membrana tympani. And if these remedies were only always applied! But often

physicians believe that they have done all in their power by applying a blister behind, or warm poultices upon the ear.

As I said before, my remarks are addressed to those physicians who are not engaged in special aural practice, and are not very familiar with the use of the otoscope. It is my firm belief that many and especially acute cases can be promptly relieved without the use of the otoscope.

Let us first consider those inflammations which so commonly originate from a severe cold, in winter as well as in the warm season. A person who has been afflicted with chronic pharyngitis is taken with a violent cold in the head. During the act of deglutition, he often feels an uncomfortable strain and soreness in the region of the ear, or in the course of the Eustachian tube; he has a sensation of fullness in the ear and a heaviness in the head, and occasionally shooting pains in the ear. These symptoms, and the failure of the Valsavian experiment (the attempt to force air into the middle ear through the Eustachian tube while the mouth and nostrils are closed) clearly indicate that inflammatory irritation has extended into the middle ear. Usually it is confined to one side. Sometimes it happens that the patient trying to blow his nose, feels a sudden, severe, stinging pain in one ear, attended with the sensation as if a foreign substance had got behind the membrana tympani. This uncomfortable sensation continues, and in the subsequent night the patient awakes with earache which does not abate till toward morning. But the ear remains sensitive also during the daytime; the hearing is muffled and there is a roaring noise in the ear. Under favorable circumstances these symptoms gradually subside. With some patients, however, the sensation of fullness, the roaring noise and deafness continue. At night the ear begins to ache again, and the pain will not cease again until a purulent discharge appears in the external meatus.

The membrana tympani, in these cases, has become perforated in consequence of a violent otitis media caused by muco-purulent matter which had accidentally been blown from the Eustachian tube into the hyperæmic tympanum. During a severe naso-pharyngeal catarrh, the otitis media has, in many

cases, a different origin. In leaving a hot room the patient exposes one ear to a draught of cold air, wind or rain; or he has been sitting in a draught, one side exposed to the open window. At once he experiences an uncomfortable feeling over that side and in that ear. Again it is at night time that the patient is awakened by earache, which does not subside until the discharge of a sero-purulent secretion from the external meatus shows the drum membrane has been perforated. This perforation may take place within a few hours, or after a few days during which time the patient suffers great pain and cannot rest or sleep. The external meatus soon becomes involved in the inflammatory process as is shown by a tumefaction of its texture.

The region in front of the ear is, as a rule, very tender, especially on pressure of the tragus; but the mastoid region becomes sensitive to pressure only, if the affection has lasted some time or been improperly treated. Such cases are simple catarrhal inflammations of the middle ear.

Under a half way proper treatment they will get well within two to six weeks, the at first copious otorrhœa gradually decreasing. In a healthy, robust person the loss of substance in the membrana tympani is very limited, the perforation is closed by cicatricial tissue with or without adhesions; but more or less deafness remains, which very seldom disappears spontaneously.

What shall a physician do, residing in the country, unable to procure the services of a specialist, to prevent the otitis from running such a course as to jeopardize the functions of the ear, or even the life of the patient? In the first place, he shall employ the water douche, and then the air bath. For which purpose two instruments are required, which every practitioner ought to possess; viz., the *naso-pharyngeal syringe* and the *air bag*. The latter being for the removal of the secretion from the tympanic cavity, and the syringe for cleansing the naso-pharyngeal space. If the syringe is used previous to the air bath, the latter will be more successful, as it is then sure not to carry any mucus from the orifice of the Eustachian tube into the tympanic cavity. The bulbous nozzle of the syringe charged with a warm solution of common salt or ammonia, is

passed into one nostril of the patient, and the syringe emptied by a moderate pressure upon the piston. The lotion is injected into the nasal cavity, whence it passes into the pharyngeal space toward and into the tubal orifices, and after washing away any mucous which may have gathered on these parts, the liquid returns through the other nostril. One must, however, be very cautious in using these injections, for, if too much force be used, or the other nasal cavity be obstructed, the fluid might be forced into the healthy middle ear, causing inflammation. The cleansing of the naso-pharyngeal cavity is followed by the air bath. The bulbous nose-piece of the air bag is firmly inserted into one nostril, the patient takes a little water into his mouth, and swallows it at a given sign (1, 2, 3), while at the same instance the surgeon suddenly compresses the bag. In this manner the air in the naso-pharyngeal cavity is condensed, and will during the act of deglutition escape into the middle ears, provided the Eustachian tubes are not completely obstructed.

This experiment must be repeated several times in succession, after which the patient usually feels greatly relieved. For if the membrana tympani has not been ruptured yet, the tympanic cavity has received a fresh supply of air and been relieved of the abnormal tension and pressure. In young persons, and especially in children, the effect is usually instantaneous; the earache ceases and pressure upon the tragus is not painful, at least, for some time. In some cases, even the morbid process could be aborted, and the suppuration prevented by the repeated employment of the water douche and air bath. Where the membrana tympani has been perforated, the air and water bath serves to cleanse the ear of the purulent secretion, which after this operation is often seen to flow copiously from the external meatus.

A second local remedy in the treatment of catarrhal inflammations of the middle ear, is the application of cold on the ear. Leeches have repeatedly been recommended to be put in front of and behind the ear; but my experience is that they afford temporary relief only, and in many cases do positive harm.

The favorable influence of cold is usually very marked. A small towel is folded, to the size of from six to nine inches square, soaked in cold water, and wrung out well and put on in such a manner that it covers the posterior portion of the face, the ear and the side of the neck. The wet towel is covered with a dry woolen cloth. After half an hour the wet cloth is changed. The change of dressing must be done so quickly as to leave the ear uncovered but a second, as otherwise the patient might catch cold. After a few applications the pain abates. They need now to be changed only every one to two hours, but must be continued for one, two or three days, till the pain does not return. As the pain grows especially severe at night, it is advisable to change the wet dressing oftener after six o'clock in the evening, until the patient sleeps. For simple, uncomplicated cases this local treatment is all that is needed; besides the regulation of the bowels, which always must be attended to.

But in other cases this treatment will not prevent the pain from returning at night and depriving the patient of sleep. Many physicians then, as I have observed, resort to hypodermic injections of morphia, in the region of the ear. No doubt sleep is thereby often procured. But my experience has taught me, that in excitable persons, women particularly, the morphine often produces a morbid nervous irritability, and gives rise to complaints more troublesome than the original affection; viz., toothache, neuralgia in the ramifications of the fifth nerve, spasm of the masseter and cervical muscles. For internal medication, I can highly recommend the oil of turpentine, to be given in capsules, each containing from 10 to 12 drops; three capsules are taken at noon, and five or six in the evening. The turpentine is continued for two or three days only; nausea and dizziness do not contra-indicate its further use. But if the earache does not subside in the first night, the remedy may as well be discontinued. For children, who are so often seized by earache at night, due to catarrhal inflammation, I prescribe the iodide of potassium. The pain once over, it is only necessary to use the air bath once daily, and to remove all secretions from the external meatus by

means of a soft camel's hair brush; the meatus is plugged with cotton and the ear is covered with a cloth. Every two or three days the ear may be syringed with a weak solution of salt.

By this treatment the catarrhal inflammation will completely subside within six to fourteen days, even if the membr. tympani has been perforated and a purulent secretion is discharged from the external meatus. But in order that the hearing power be completely restored, the air douche, with *Gruber's new method*, had better be continued. At the moment when the air bag is suddenly emptied into the nostril, the patient pronounces such syllables as hick, hack or huck, giving particular stress to the enunciation of the k. When, during this experiment, the patient's head, with the affected ear up, is inclined to one side, the air can be distinctly heard to whistle through the perforated membr. tympani. Children need neither swallow water nor enunciate the above syllables, to make the air douche successful; for their Eustachian tubes will be opened by the strain of the pharyngeal muscles, during the act of crying and screaming which is almost inevitable. Should the muco-purulent discharge continue over one week after the painful stage is passed, have the spiritus vini rectificatus may be employed, as I recommended it for the treatment of chronic otorrhœa, years ago. The ear, having been well cleansed, is filled with lukewarm alcohol. If it enters the tympanic cavity it creates an acute pain, which, however, lasts but a minute, and after several applications is not felt at all. By the application of the alcohol the purulent discharge disappears, often most rapidly, and the cicatrization is greatly hastened.

There is a considerable number of acute inflammations of the middle ear, which undoubtedly cannot be accepted as simple catarrhal affections. In these cases the pain is usually very severe, irradiating over the whole head, and depriving the patient of his nightly rest. The exacerbations at night are particularly marked. In the simple catarrhal inflammation the earache subsides as soon as the tension and pressure are relieved by the escape of the pus through the perforated membr. tympani. In the cases under consideration, however, the

otorrhoea does not give any relief. It even happens that the patient's attention is not called to the ear as the seat of suffering, until a discharge from the ear is noticed; for the pain extending over the whole head and face, and the sensitiveness of every movement, make the patient believe he is suffering from rheumatism, rather than an aural affection.

The air bath, and all other remedies mentioned above, give but temporary relief, the cold water dressings proving even harmful. The inflammation soon involves the meatus externus. The region in front of the ear as well as around it, becomes tender; the integument over the mastoid process being red and swollen; in fact, all the symptoms indicating, even to an inexperienced observer, that the inflammation has proceeded from the periosteum of the meatus externus to the mastoid process, or has already implicated the mastoid cells. High fever generally accompanies this affection. This inflammation is very dangerous. It attacks almost exclusively adults, especially cachectic individuals and persons who have had syphilis, or have repeatedly been troubled with rheumatism. I have observed cases¹ in which such inflammations of the ear alternated with rheumatic pains in other parts of the body. And I am surprised that other writers have not yet emphasized the rheumatic nature of certain acute aural diseases.

Although the air bath affords but transient relief, it must not be neglected. Cold applications must be avoided. The only local remedy which will relieve the earache is the application of warmth, either in the shape of warm cloths covering the whole side of the head, or as warm poultices; they must be changed often and quickly, in order to prevent the head from becoming cold. It is important to cause a free action of the bowels and the skin. For internal administration I prescribe quinine and salicylic acid.²

It is surprising how the most violent earache subsides un-

1 See my book on Progressive Schwerhörigkeitsformen.

2 B. Quin. muriat.

Ac. salicyl. aa 0, 8.

Sod. bicarbon. 0, 06.

Three or four powders to be taken daily; the last one at 7 P. M.

der this medication, so that the patient is again able to rest at night. In other cases, however, large doses of turpentine seem to operate with better effect. If either treatment proves inefficient, I have found the carbolic acid to be a valuable means to subdue the inflammatory symptoms and the painful exacerbations. Hypodermic injections (one part of carbolic acid to ten parts of water) are made into the most tender spot behind the ear, every morning and evening.

Should all these remedies fail to reduce the inflammation, which is sometimes the case in cachectic persons—should the tumefaction over the mastoid process increase instead of decreasing, the surgeon must not hesitate in making a deep incision down to the periosteum behind the ear parallel with, and half an inch from the insertion of the concha. The incision should be one inch long at least. It is generally followed by a marked relief, even if pus has not been drawn. The warm applications must be renewed. But if the symptoms unmistakably point to an accumulation of pus within the mastoid cells, no time must be lost in treating this dangerous complication as recommended in all works on aural diseases.

I have yet to say a few words regarding the *intermittent otitis*, which has not been described yet in the text-books, because they consider all otitides under the head of catarrhal inflammations. Since I first described the *otitis intermittens*¹, I have observed a great many cases of acute aural inflammations which belonged to this class, and were treated as intermittent otitis, so speedily cured that I have no hesitation in saying that a great number of acute otitides, particularly of those occurring in spring and fall, are caused by malarial influences. This cause cannot always, though it may be often traced. The reason that this form of otitis has hitherto escaped the notice of observers, is I think, that almost every acute otitis shows a pronounced remittent character; during the day the fever and pain subside; at night they increase in violence to abate again toward morning.

The following symptoms are characteristic:

1. Monatschrift f. Ohrenheilkunde No. 11, 1871, and Deutsche Klinik, No. 5, 1874.

The disease is ushered in with a more or less pronounced chill, attended by an uncomfortable sensation and roaring noise in the ear. The next day a violent angina and nasopharyngeal catarrh make their appearance, but on the second day, or night, the patient has another chill, followed by increased roaring and by a severe pain, mostly in one ear. The earache lasts until morning. After a few hours' sleep the patient awakes, and is bathed in perspiration. During the day he feels tolerably well, only having an uncomfortable feeling in the ear, but being more annoyed by the symptoms of the pharyngitis. But the more these latter symptoms subside the more violent the noise and pain in the ear become. Again, they return in the evening, or at night, preceded by a chill, and in the third or fourth night pus is copiously discharged from the ear. Not till then the patient calls upon his physician, because he had been deceived about the nature of the disease by the daily respite from pain. The examination generally reveals the signs of the simple, so-called catarrhal otitis; sometime a perforation of the membrana tympani with a purulent discharge. Pressure upon the tragus, which in all other aural inflammations is also very tender during the day, is not painful during the intermissions, at least in the beginning of the disease; nor is there any fever.

The physician employs the remedies usually recommended as effective for catarrhal affections, or those I have mentioned above; nevertheless he will see the symptoms aggravated in the following night. If there is no otorrhœa, and the physician detects an accumulation of pus behind the membran. tymph., which he thinks causes the increased pain, he will find by experience, that the paracentesis of the membrane and the evacuation of the pus are of no benefit. Very soon the mastoid process is implicated, and the free intermissions become less marked when the mastoid cells are filled with pus.

No air bath, cold or warm applications, injections of morphine, nothing in short, can prevent the return of the fearful exacerbations at night. Even if the mastoid cells have been opened, and a free outlet for the pus has been established, the painful

symptoms will continue always to become exacerbated at a certain time. The Eustachian tube is in the most cases scarcely pervious to inflation, even if there is no naso-pharyngeal catarrh; the walls of the tube are relaxed. In all such cases we must ascertain whether the patient has chills at certain hours, and at regular intervals we must use the thermometer, inquire as to profuse perspirations, and examine the spleen, which very often is quite sensitive to pressure.

The therapy must consist in *large doses of quinine*. I generally prescribe,

R. Quin. muriat,	- - - -	0.5 to 1.0 grammes.
Morph. muriat,	- - - -	0.02
Rhei. pulv.	- - - -	0.06. M.

At noon the patient takes $\frac{1}{2}$ powder, and one powder in the evening, about $1\frac{1}{2}$ hours before the return of the chill and pain. The quick and decided effect of this treatment is often surprising.

The effect is less determined in neglected cases, because of complications then already created which require the local treatment mentioned above; I have found that in protracted cases of this intermittent inflammation the perforation of the mastoid process is often urgently indicated in order to establish a free outlet for the pus, which, under an improper treatment, accumulated in the mastoid cells. But the morbid process itself is effectually arrested by the administration of quinine.

Clinical Reports.

NOTES FROM PRIVATE PRACTICE.

Two Cases of Stricture of the Urethra.

As there is still a great difference of opinions among surgeons respecting the curability of organic stricture of long standing, I desire to record the favorable result obtained by gradual dilatation in an organic stricture of twenty years' dura-

tion. Abernethy and others advise to begin the exploration of a strictured urethra with fine bougies "corresponding to the stream;" while Dittel sees in the early use of larger bougies a safer method, because the fine instruments are too liable to make false passages.

Case I.—I. B., aged 43 years, a sailor, had gonorrhœa twenty-two years ago, and has been suffering from stricture of the urethra for twenty years. When he came under my care, in February, the stream of his urine was of the size of a knitting needle; the urine was turbid and alkaline; micturition frequent. He complained of pain in the sides, costiveness and general weakness. The stricture occupied the membranous portion of the urethra where a hard tumor could be felt through the perineum. I succeeded in passing a No. 1 French bougie through the stricture; but twice subsequently I failed with the same instrument, and on the third trial, when it seemed to pass through, I convinced myself it was pursuing a false passage. I therefore desisted from all further attempts until the damage could be repaired.

I then introduced No. 26 of a set of metallic sounds (the largest size which would be admitted by the external orifice of the urethra) as far as the stricture, and retained it there for twenty minutes. This being repeated eight days in succession, the lower part of the stricture was stretched to such an extent that on trying a small bougie it passed through without difficulty, and afterward the stricture dilated gradually, though slowly, so that at the end of three months the No. 26 could be admitted. By this time the urine had become clear and the patient had greatly improved in health. Three months later I could ascertain that the caliber of the urethra had not decreased, yet admitting the No. 26 as easily as before.

Some practitioners would, perhaps, have shortened the treatment of this case by internal urethrotomy. But if the patient can only occasionally be seen, I do not think it prudent to perform an operation which possibly might jeopardize life, to say nothing of the reputation of the physician.

Case II.—This case is remarkable in its anatomical features, since there were all the symptoms of stricture,

obstruction to the bougie alone excepted. Others might therefore not call it a stricture; but I treated the difficulty as such, and succeeded in relieving it. The brief history of the case is this: A young man of 33 called on me in June last, on account of several disorders, following an attack of gonorrhœa, which he had three years ago. His complaint was a steady diminution of the stream and a change in its direction, frequent micturition, turbidity of the urine, intercurrent pains in both sides, habitual costiveness, and a general depression of the system, which the patient attributed to the medicines he had been taking for nearly three years. From this history, I concluded he had stricture and introduced a metallic bougie, No. 26, but to my great surprise it passed along the urethral channel without meeting any obstruction. The external examination of the urethra, through the rectum, failed to detect any change in texture or sensibility. Under these circumstances, the only way of explaining the symptoms was to suppose that granulations, springing from some ulcerated patch in the urethra, and soft enough to give way to the catheter caused the diminution of the stream, and, as a consequence, the incomplete evacuation of the bladder. The only objection I could find to this supposition was, that there was no trace of blood on the instrument. I introduced, twice a week, a metallic bougie, No. 26, coated with an ointment containing tannic acid, and left it in situ from thirty to sixty minutes. The stream soon grew larger and continued so after each introduction of the instrument, so that, after six weeks, the patient was discharged completely cured. I should not be surprised if after some months the patient should return, complaining of the same disorder, because I think that this was the first stage of stricture, and that I must expect the second, namely, retraction of tissue. However, I learn from the patient now, two months after his discharge, that he is feeling quite well, and notices no diminution in the stream of urine.

DR. H. BANGA.

CHICAGO, 20th of September, 1877.

Reviews and Book Notices.

A SERIES OF AMERICAN CLINICAL LECTURES. Edited by *E. C. Seguin, M.D.* New York: *G. P. Putnam's Sons.* 1876.

Vol. II. No. V. (whole No. 17), Diagnosis of those Diseases of the Eye, which can be Seen without the Ophthalmoscope. By Henry D. Noyes, M. D., Professor of Ophthalmology and Otology, etc.

No. VI. (18), The Modern Methods of Examining the Upper Air Passages. By George M. Lefferts, M. D., Clinical Professor of Laryngoscopy, etc.

No. VII. (19), On Tracheotomy and Laryngotomy. By H. B. Sands, M. D., Professor of Anatomy, etc.

No. VIII. (20), The Hypertrophied Prostate. By Robert F. Weir, M. D., Lecturer on Genito-Urinary Diseases, etc.

No. IX. (21), Points in the Surgery of Childhood. By J. H. Pooley, M. D., Professor of Surgery, etc.

No. X. (22), Spinal Irritation; Its Pathology and Treatment. By William A. Hammond, M. D., Professor of Diseases of the Mind and Nervous System, etc.

No. XI. (23), On the Treatment of Eczema. By R. W. Taylor, M. D., Physician to Charity Hospital, New York.

Vol. III. No. I. (25), Transfusion of Blood and its Practical Applications. By Thomas G. Morton, M.D., one of the Surgeons of the Pennsylvania Hospital, etc.

CLINICAL LECTURES, delivered by men of recognized ability, are always attractive. They possess a charm of their own. Their very freedom from the abstract and abstruse reasoning of the didactic teacher, their application of principle to practice, of the methods of diagnosis to the case to be diagnosed, of the remedy to the condition to be remedied, are attractive merits. The conversational tone of the writing, while it might detract from the dignity of a more studied

effort, is here not without its value. Nothing is more detestable than a slovenly-prepared clinical lecture. He who spreads before his auditors (or readers) a clumsily compounded abstract of the text-books he has chanced to consult upon the subject in hand, as well as he who laboriously enlarges upon a topic which has been worn threadbare by every tyro in medicine, is equally an offender with the ignorant or careless author.

All of the merits, and few, if any, of the faults described, distinguish this valuable series of essays; and the editor has fairly earned the honor of congratulation, not only on account of the practical results here displayed, but also on account of the brilliancy of the scheme itself. The lectures are, as a rule, characterized by originality, conciseness, accuracy and practical suggestions. Some of them are quite equal in point of classical and literary excellence to the productions of that prince of clinical exposition—the eloquent teacher of the Hotel-Dieu de Paris.

DR. NOYES' LECTURE, (No. V.), treats exclusively of the question of *diagnosis* of such ocular and orbital diseases as can be recognized without the aid of the ophthalmoscope, and by the employment merely of oblique illumination through the medium of a convex lens of two-inch focal distance. This subject will thus commend itself especially to the general practitioner, whose attention to diseases of the eye too frequently terminates, when it is thought to be necessary to employ the ophthalmoscope. All lesions possible of recognition without this instrument, from imperfect accommodation to those of traumatic origin, are here concisely described with a view to their recognition.

DR. LEFFERT'S LECTURE, (No. VI.), will prove chiefly useful to those who are unfamiliar with the use of the laryngoscope, since it points out clearly the chief causes of failure. The usual obstacles are enumerated as follows: a short frenum linguae, an unmanageable tongue, irritability of the fauces, hypertrophy of the tonsils, elongation of the uvula, and an unfavorable position of the epiglottis. A wood-cut produces very distinctly the normal relation of all the parts represented in the laryngeal picture upon the mirror. The essentials for

examination are stated to be, two mirrors, one laryngoscopic, one rhinoscopic, a forehead reflector, (preferably provided with Kramer's band) good illumination, if possible by artificial reflected light, and one Türk's spatula.

DR. SANDS (LECTURE, No. VII.), in the enumeration of the morbid conditions of the air passages which may require the artificial opening of the wind-pipe, mentions the various forms of laryngitis, as well as foreign bodies in the air passages, laryngeal or tracheal tumors, injuries of the larynx or trachea, stenosis of the larynx after wounds or ulcers, and spasm or paralysis of the laryngeal muscles. We find no allusion here to membranoid occlusions, which the author, without doubt, would class under the division of specific laryngitis, as in the greater number of instances these membranous formations result from syphilitic disease. The morbid conditions external to the air passages, which may call for the operation, are thus given: impaction of foreign bodies in the pharynx, or œsophagus; tumors overlying the superior aperture of the larynx; cervical tumors or abscesses pressing on the trachea; thoracic aneurisms pressing on the pneumogastric or recurrent laryngeal nerves, or other tumors having the same result; and lastly, operations in the mouth or pharynx, involving copious hemorrhage.

DR. WEIR'S LECTURE (No. VIII.), is a thoroughly careful and judicious exposition of the subject of prostatic hypertrophy, for the relief of the symptoms attending which, it is almost needless to say, diurnal catheterization is recommended. He advances beyond the teachings of the text-books, in pointing out the fact that it is muscular and glandular hyperplasia which induces the enlargement (myoadenoma), not, as has been taught, undue development of fibrous tissue. He gives a list of catheters found useful by himself in relieving the distension resulting from prostatic enlargement, but omits to mention two, either of which may prove effective when all others fail. One is the instrument made of cable wire, such as the dentists use. It is far more flexible than the vertebrated catheter, and should always be preferred to the latter in view of the danger which might result from the disconnection of its various links.

The other is the simple soft rubber instrument, open at one extremity and closed at the other, with foramina at the side. It can be insinuated where English and French instruments will fail to pass.

DR. POOLEY (LECTURE No. IX.), has confined himself to a discussion of the method of operating in phimosis and hare-lip. His subject is treated in a judicious and practical manner, the lecturer evidently having enjoyed a fair experience in treating the deformities under discussion; but as the operations for relief of the latter are not, in any sense, exclusively performed in childhood, we are at a loss to perceive the fitness of the title of the lecture.

Dr. Pooley, however, while he traverses a well worn path, arouses a new interest at almost every step, by his ingenuity and candor. We have heretofore, in these pages, briefly noted his employment of black sutures after excision of the prepuce, in order to commend the procedure as one of those little measures whose adoption often contributes to the elegance of the result.

DR. HAMMOND (LECTURE X.), understands by spinal irritation, that condition in which there is anæmia of the posterior columns of the spinal cord, or, as he terms it, "posterior spinal anæmia." An enumeration of the symptoms of a disease so exactly located would possess great interest in connection with this subject, but after brief reference to some of the former—the list including such widely divergent phenomena as hiccup, insanity, gastric acidity, asthma, visual disturbances, and incontinence of urine—the author disappoints us by stating that all have not been mentioned, since their detail would "take up more time than our lecture affords." The result is, that the reader of this essay does not gain a clear conception of the disease which the author is attempting to discuss, and, if the dim suspicion is awakened that there is room for doubt whether all these symptoms result from the pathological condition named, certainly only Dr. Hammond is to be blamed for it.

The treatment recommended is hygienic, onic, and the employment of remedies which increase the amount of blood in

the spinal column; strychnia, phosphorus, opium, picrotoxine.

We should, however, not advise the too enthusiastic student of these clinical lectures, to employ the remedies named in "salivation," "somnambulism," "pyrosis," and "pain in the testicles," until he has become thoroughly familiar with all the symptoms of "posterior spinal anaesthesia."

DR. TAYLOR'S LECTURE ON THE TREATMENT OF ECZEMA (No. XI.), is one of the most delightful clinical essays of the series. He describes well the injurious results of applying tarry and caustic preparations in the local treatment of the disease in its acute phase, and praises the bran baths, and the application of alkaline lotions, with hot or very warm water, which are, as a rule, so grateful to the patient and so often efficacious in a remedial point of view.

The value of Dr. Taylor's injunction against the use of the iodide of potassium in such cases—a remedy to which the general practitioner is too often ready to resort—is well illustrated by a case which was made the subject of a clinical essay by Dr. Duhring, in the Hospital of the University of Philadelphia, and published in the *Philadelphia Medical and Surgical Reporter*, of August 4, 1877—since Dr. Taylor's lecture was put in print. In it a bullous eruption, induced by the iodide of potassium, had occurred extensively as a result of the improper treatment of a small patch of infiltrated eczema.

Lack of space forbids further reference to the treatment recommended in chronic forms of the disease, and especially to the local and internal treatment of eczema infantile, the therapeutic rules laid down being so clear, concise, and practical, that they cannot fail to be appreciated by the busy practitioner who would otherwise have to consult the larger treatises.

We believe that this lecture will prove of greater value to the average reader than any other of the series. And this, not merely because of the skill with which the author has handled the subject, but by reason of the fact that where one medical man, in general practice, is summoned to open the larynx, to operate for hair-lip, or to perform transfusion, twenty are asked what to do for a baby with "scalled head."

DR. MARTIN'S LECTURE (No. III., No. I.), contains the following list of disorders for which transfusion has been considered available: haemorrhage, idiopathic anaemia, chlorosis, leukaemia and exhaustion, pulmonary consumption, cholera; uræmic, phorphorus and carbonic oxide intoxication (of each of the two first named, one case has occurred and terminated favorably), carcinoma, pyæmia, septicæmia and puerperal fever, variola, scarlet fever and diphtheria, tetanus and epilepsy, scurvy, asphyxia neonatorum, hydrophobia, insanity, and sunstroke.

Cuts are shown representing the apparatus of Howe, Aveling, and the author. The latter uses defibrinated blood, and his method is not peculiar to himself. He has occasionally injected into the radial artery toward the hand, after ligating above, but as a rule he considers the transfusion into a vein the better mode.

We conclude with a single extract: "I charge you to let no person die in an emergency, as from post-partum haemorrhage, merely because you have not all the specified implements. A pocket case, a small syringe, and fresh blood, are all you will find necessary; and when great haste is required, I should not hesitate to inject the blood without defibrination. Only be reasonably careful of clot and air, and especially avoid throwing in the blood rapidly. It can hardly be thrown in too slowly."

J. N. H.

SOME GENERAL IDEAS CONCERNING MEDICAL REFORM. By
David Hunt, M. D. A. Williams & Co., Boston.
1876.

This is a little book that deserves more of a notice than we have space for in this journal. In this day of rapid advancement in every department of thought, such books are valuable to tell us where we are, and whither we are drifting. It is plain, however, that the author, like so many others at the present day, has completely mistaken science for medicine. America might well be proud to have great anatomists, physiologists and pathologists. But anatomists, physiologists and pathologists are not physicians, however much they may contribute to improve the art. We would like to see the prelimi-

nary course of study so modified as to embrace the widest possible scientific education. We think we could lay out a course suited to the physician from —— we were about to say from the *ovum* to the maturest manhood. We are quite sure, however, that the medical course proper, extending as it does over three years only, should be in the highest degree practical. This was probably the idea in establishing what is known as the "Sumner School." By the most extensive clinical instruction it was purposed to teach young men *how to take care of sick people*. Every attempt to make medicine a science is an attempt to inaugurate or perpetuate a sort of medical monasticism.

J. I. T.

THE CURE OF HERNIA—By what the Author terms New Methods—By George Heaton, M. D. Boston; H. O. Houghton & Co. 1877.

This book contains 196 pages neatly bound in cloth. The contents are arranged and edited by J. Henry Davenport, M. D., of Harvard.

The author devotes twenty-six pages to a description of what hernia is, and the different kinds of hernia; and very concisely and clearly describes the various forms of rupture, giving statistical reports from various sources showing the frequency of hernia in the human family.

The operations of Gerdy-Wutzer and Wood are not referred to, and the plan of plugging the hernial opening condemned, as causing too severe inflammatory action and the subsequent throwing out of the plug as a foreign body.

Then comes the author's method of cure, which is termed the "Liquid Method," or *the method of tendinous irritation*.

The operation is performed with a syringe somewhat resembling the ordinary subcutaneous syringe, which is loaded with the modicum of irritating fluid. The patient is placed in the recumbent position, and the contents of the hernia returned within the abdomen. The hernial sac also should be returned if possible.

Armed with the instrument charged and prepared, the

operator introduces its beak into the inguinal canal. Supposing the case in question to be an inguinal hernia, care is taken not to injure the spermatic cord.

About ten minims of the liquid—which is made of the fluid extract of *quercus alba*, and of the solid alcoholic extract of the same material—is injected into the canal. Morphia is sometimes added to the solution to relieve pain.

A cut and description of the instruments used are shown in the book. After the operation a bandage or truss is worn, to retain the intestines or contents of the canal within the abdomen until a cure is completed.

The radical cure of the rupture is accomplished, as claimed by the author, by producing a low grade of inflammation in the fibrous or fibroid tissue causing lymph to be thrown out into the canal, which being thus subcutaneously produced, has a strong plastic or organizing tendency. Also that its production is largely interstitial, thickening the fascia and tendons, and thus closing the hernial or inguinal canal.

The theory is a plausible one, and the operation a comparatively simple one. It is a somewhat new method of trying to accomplish a result long since arrived at, but too seldom attained.

The author speaks confidently of the result, and the cures by this plan of treatment in his own hands, and we confess that his statements have evidence of candor as well as facts.

Get the book; it is well worth reading. And the operations for the cure of rupture are well worth trying. H. V.

AIKEN AS A HEALTH RESORT. By Dr. W. C. Geddings, M. D.

Dr. Geddings has been for several years a resident of Aiken and a careful student of the climate of this section of the Southern States. In this pamphlet of about 30 pages he has collected a large number of valuable facts, bearing upon the relation of climate to disease, and especially the climate of the sand hills of South California to diseases of the respiratory organs. His conclusions are that benefit may be reasonably expected in that climate in most chronic diseases of an asthenic type. He enumerates

1st. Bronchitis. 2d. Consumption, (except in last stages, and in acute tuberculosis, laryngeal phthisis). 3d. Malarial Disease. 4th. Dyspepsia. 5th. Anæmia. 6th. Diseases of Females. 7th. Diseases resulting from over work, confinement, etc. 8th. Convalescence from Pneumonia and Pleuritis. 9th. Convalescence from Typhoid Fevers, and other Exhausting Diseases. 10th. Syphilis. 11th. Children convalescing from Scarlatina, Measles, Whooping-cough, etc.

Aiken is contra-indicated in the following diseases.

1st. Laryngeal Consumption. 2d. Laryngitis. 3d. Bronchitis when attended with very tight cough, sparse secretion. 4th. Bright's Disease. 5th. Eye Diseases. 6th. Diseases of the Nervous System.

The reasons of these conclusions are indicated, but cannot be given for the want of space.

THE TONIC TREATMENT OF SYPHILIS. By *E. L. Keyes*, A. M., M. D., adjunct professor of surgery, etc., New York. *D. Appleton & Co.*, 1877, pp. 83.

The author of this interesting little monograph, published an article on the subject of blood counting with the hématiomètre, in the *American Journal of the Medical Sciences* for January, 1876, which speedily attracted attention to his studies and secured for them a favorable recognition. The present treatise seems to have been largely the result of the investigations reported in the paper named above, the attempt being here made to establish upon a satisfactory basis a rational method of treating syphilis. We have, heretofore, in the digest department of this JOURNAL given a brief abstract of the conclusions reached by the author after repeated and careful experiments in counting the blood corpuscles of syphilitic patients—not only those who were untreated but also those who were brought under the influence of various medicaments. A fair illustration of the method of treatment preferably adopted by Dr. Keyes, as a result of experiments, may be found in his use of the centigramme granules of the protiodide of mercury, prepared by Messrs. Garnier & Lamoureux, of Paris.

For three days one granule is taken immediately after each meal, and on the fourth day one granule is added to the mid-day dose—this addition being continued for three days also. On the fourth day again, another granule is added (the patient, for example, taking two in the morning, one at noon, and two at night), and this course also is continued for three days. Such gradual addition is progressively conducted until there is positive evidence of intestinal irritation, as for example, colicky pain, diarrhoea, or symptoms of incipient salivation, when the patient's "*full dose*" has been ascertained. This is to be distinguished from his "*tonic dose*," which latter is held to be one-half of the former amount, and one which should be unceasingly administered, day after day and month after month, waiting for new symptoms. Upon the supervention of the latter, recurrence should be had to the "*full dose*," for their prompt relief.

Such is a brief outline of the scheme of what Dr. Keyes calls the "*tonic treatment of syphilis*." But the title has already given rise to a misapprehension on the part of the reviewers of the monograph, which has elicited a rejoinder from the author. In it¹ he takes occasion to utterly disclaim any responsibility for the argument that because mercury in small doses is tonic and when thus administered is capable of curing syphilis, therefore the drug is curative by virtue of its tonic action. On the contrary, he claims that mercury in short courses induces the disappearance of syphilitic symptoms, but produces debilitating effects if continued in full specific doses. Long continued in small doses, it controls the disease and is physiologically tonic. Consequently the specific action of mercury may be so managed as to constitute the remedy a tonic medicament.

This much for the distinctive features of this little book, which are certainly full of interest, suggestive and of great practical moment. It is true that the general system of procedure recommended, is by no means novel or untried, having been largely employed by successful practitioners before the author's experiments were instituted. He is, however, fully

1. Louisville Medical News, No. 10, April 28th, 1877, p. 199.

entitled to the credit of presenting it anew in a lucid and forcible manner, to the notice of the general profession, and, in particular, for his successful refutation of the somewhat hastily reached conclusions of Wilbouchewitch, Grassi and Ricord.

Apart from these distinctive peculiarities of the essay, a chapter is added upon the local treatment of especial lesions of syphilis, which are considered in a manner quite satisfactory, when the small space allotted to the subject is considered, neither the title nor scope of the volume, however, really demanding any such addition.

We are pleased to note that the claim of the hot springs of Arkansas, with reference to the eradication of syphilis, is here justly characterized as "utterly unfounded in fact." Other denunciation might have been employed for the purpose of warning syphilitic patients of the shameless impositions of the charlatans who swarm in the vicinity of that resort. We must admit to some surprise, in reading, on page 61, a concession as to even the "adjuvant" value of guaiac and sarsaparilla in the treatment of the disease; and cannot but deprecate the use of such language as the following in connection with any scientific subject: "No means in the physician's hands place him so near the Deity as the iodide of potassium." Such words suggest, in a most uncomfortable manner, the extravagance of statement which usually accompanies the *suggestio falsi* or the *suppresio veri*.

The typographical appearance of the work is unexceptionable; and we believe that, as a whole, it will not fail to add to the established reputation of the adjunct professor of surgery in Bellevue Hospital Medical College.

J. N. H.

Correspondence.

BOSTON, September 26, 1877.

EDS. MEDICAL JOURNAL AND EXAMINER:—Boston is a place of great pretensions, and one naturally comes here with great expectations. No one need be disappointed either, unless he entertains unreasonably extravagant notions of the "Hub" and its institutions. Her medical men and medical institutions are inferior to none in the country. Her institutions, in all departments, show the perfection that comes with age, and capable management. Nowhere in the country, perhaps, is there so large a proportion of physicians who are gentlemen of superior education and literary and scientific culture as here; among the young men too who are preparing to enter the profession, a very large proportion have received a thorough academic training; and the mental discipline thus obtained will tell in their whole career. Unlike other cities of this country, Boston is not overstocked with medical colleges, the Harvard Medical School being the only regular one, and besides this is the medical department of Boston University, a small institution which deals out only small pills.

Now I cannot continue to say only *good* things of this city, for in spite of the numbers and culture and ability of the regular profession, the place certainly takes the palm for quacks, charlatans, humbugs and "isms" of various kinds. I counted in one of the daily papers the other morning, fifteen quack doctors' advertisements, occupying nearly the whole of one side of the paper; and in addition to these, thirty cards of clairvoyants, magnetic doctors, etc. Homeopathy, too, has its adherents, as has the "faith cure," which might perhaps be appropriately classed with the homeopathic system, as faith is the essential in both. While dwelling on the "faith cure," I will mention a case I saw at "The Consumptive's Home,"—

an institution which claims to receive its support and healing through "faith"—of a paraplegic woman who has been "trusting" for the healing power these seven years, and has refused all medication or other curative means. Aphonias has existed in this case for twenty years, and even this feature of her affliction has received no benefit from this prodigious exercise of faith. While at this institution, I asked for the prevailing treatment of the consumptives, and the reply was, that some were treated homeopathically and others took no medicine or special nutrition, but trusted to the prayers of faith. "And what percentage of your patients are discharged cured," I asked. "Oh, very few, the cases most all die," was the reply, "whether they take medicine or trust wholly to supernatural power."

The city hospital is the great municipal medical charity of this city. It is admirably located for healthfulness and convenience; the grounds, about seven acres, are large, and near the salt water; the buildings are ample and mainly of the most approved model. It was one of the first erected on the pavilion plan; the first pavilions erected are somewhat defective in ventilation, but the last put up are perfect in this regard, having ridge ventilation.

The superiority of this kind of hospital ward, and this system of ventilation are so evident, that it is a wonder to me, as it is to the medical gentlemen here who have such a good chance for comparison, that at this day any other kind should be erected, especially in cities like Chicago where space is so abundant and cheap. I was pleased with the care exercised by the internes of this hospital in diagnosis, and the simplicity and judiciousness of the treatment. The expectant treatment, and the judicious, cautious use of medicines, advocated by the late Dr. Jackson, seem to have taken root here. The tub bath is largely used in the treatment of typhoid fever, and with satisfactory results. The patient is placed in an ordinary bath tub, with the water at a temperature of 80 or 90 degrees (F.), and gradually cooled by the addition of cold water. Of thirty-two cases reported treated by this method, only one died. A case I saw in one of the wards was treated during the stage of exhaustion by hypodermic injections of brandy, and with some

apparent benefit. Salicylic acid is used for rheumatism, in large doses frequently repeated for a day or two, and with good results. Jaborandi has been on trial here, but has not sustained the reputation given it by some.

On the surgical side the material for clinical study is abundant. I notice that in fractures of the leg, especially compound, the good old fracture box is still used, and for the thigh, extension by weight and pulley, and short splints are used, and the results are most satisfactory. I think that here less weight is used than is customary by some surgeons I know, and less than in some other hospitals I have visited.

The antiseptic method has been tested in this institution, but now rather fallen into disuse, as the results were not, in the hands of the surgeons here, those claimed for it by Lister and others. Dr. Blake reports 19 cases of empyema treated by permanent openings of the thoracic cavity; fifteen of the number were cured, or greatly benefited by this method of treatment. I was shown in the children's ward a case of syphilis in a little girl 10 years old; she had a large chancre on one of the labia, and inflammation of the inguinal glands. The disease in this case, too, was communicated in the ordinary way.

In my visits to the medical institutions I have not slighted the Charitable Eye and Ear Infirmary. It is, I believe, a kind of mother to similar institutions of the kind throughout the country; and yet it shows no signs of decrepitude or failing usefulness. It is admirably conducted, and furnishes an exhaustless amount of material for clinical instruction in eye and ear diseases; the instructors are among the most eminent in the country in their specialty.

The abuse of medical charities by those able to pay for medical attendance is receiving the attention of the profession here, as it is in nearly all the large cities in this country and Europe.

At the eye and ear infirmary I observed a large proportion of the patients were well-dressed and well-fed; and Dr. Jeffries made the remark that "these people often come in a hurry with a story of a baby at home, etc., when really a

carriage was waiting to take them to an excursion boat or train, or a-shopping." How to protect charitable institutions from such shameful lying and deception, is a matter of serious import.

My letter is getting long, and I would stop, were I not so anxious to give your readers a brief abstract of a case I saw operated upon by Dr. J. C. Warren, in the Mass. General Hospital, to-day.

The patient was a young woman aged 21. At the age of 16, she met with the loss of her entire scalp, including the eyebrows and a part of the skin of the right cheek. While at work in a factory, her hair was caught by a belt and shaft and the scalp torn away in an instant. Hemorrhage was slight; the scalp was picked up, replaced and stitched on, but it dried up and was clipped away entirely. She was removed at once after the injury to the Massachusetts General Hospital, and remained under Dr. Warren's care for eight weeks. Several attempts at skin-grafting were made, but unsuccessfully. She then returned to her home at Stoneham, Mass., and came under the care of Dr. W. Symington Brown. Dr. B. used a weak solution of carbolic acid locally at first, and afterwards a weak solution of bromine in sol. of bromide of potass. In about 8 months from the receipt of the injury, Dr. B. commenced skin-grafting once a week, and continued it for three years. During that time 2,600 pieces of skin were applied; the grafts being furnished by 180 different persons; mostly young people and children; one girl furnishing 103 grafts.

Since the accident she has had three attacks of pyemia; the last one accompanied by the appearance of petechial spots over the whole body, and partial suppression of urine. The entire scalp is now healed over, except a small red smooth spot above the left eye. This is a portion of the conjunctiva which was torn from its normal position and reflected upon the eyebrow, and which closely resembles an ordinary granulating wound; but after faithful trial the skin grafts would not take here as on the rest of the scalp, and to-day Dr. Warren performed an operation with a view to replacing the conjunctiva by dissecting it from its attachment to the eyebrow, and stitching the

free border to the eyelid. The raw surface was then covered with a piece of skin as large as a half-dollar taken from the patient's thigh. Large skin-grafts have succeeded in a few cases reported; but in this case nothing was claimed more than an experiment. If the large graft failed, the surface could afterwards be treated with the smaller ones, as was done with the rest of the scalp. The eyes were not injured further than the laceration of the lids in consequence of which the left eye is partially closed. The vision is so good that she does sewing and takes lessons in music. After the scalp began to heal, the downy hair on the neck took on an extraordinary growth, and this hair is now fourteen inches long and curly. I propose to follow up this case and learn, if possible, the result of Dr. Warren's operation to-day, and may give your readers the benefit of it. The case is one of great interest, in showing the value of skin-grafting when followed up with the commendable perseverance exhibited by the gentlemen who had charge of this case.

R. M. LACKEY.

"COLOCYNTH AND COLOCYNTHIAN REFLECTIONS."

SHOPIERE, Wis., October, 1877.

In a very learned article, with the above heading, Dr. Tucker, in your last issue, gives us the result of his reflections, which is in his mind, doubtless, an original discovery, to wit: "That colocynth will allay the pain caused by excessive peristaltic action, better than any drug in use, not excepting opium, providing it be used in the proper dose."

Now if Dr. Tucker will take up "Bæhr's Therapeutics," (homeopathic) and turn to page 473, he will find these words: "The treatment of such a colic is very satisfactory. We possess a remedy against it which is almost always effective, whereas every other method of treatment seems without any avail. We mean *Colocynth*." And by turning to the *Materia Medica* of Hemple, Hering, Burt, and other Homeopathic writers, he will find that colocynth has held a place high in their estimation in this class of disorders, including diarrhoea and dysentery.

Thus we often find that what at first seems to us to be an original discovery, ultimately proves to be but a "bequest from antiquity." And the Doctor will, upon investigation, find that the hydragogue action of colocynth has not been the limit of its usefulness.

C. L. GISH, M. D.

WAS A QUARTER OF A GRAIN TOO LARGE A DOSE?

In the August (1877) number of the CHICAGO MEDICAL JOURNAL AND EXAMINER, Dr. Ingals published a paper, entitled: "Danger from Hypodermic Injection," in which the doctor says: "I was called in the night to see a woman, who, from continuous watching with sick children, had become debilitated, and, as a result, suffered at times from severe pains of a neuralgic character. * * * I dissolved one-fourth of a grain of morphia in pure water, and administered it under the integuments on the outer side of the arm.

The doctor then states, "in a few seconds the breathing becomes stertorous; the pulse failed; the lips and countenance become livid, etc., etc." The woman, he tells us, was, however, resuscitated.

The paper also contained reports of cases Nos. 1, 2 and 3, by E. Wenger, M. D. Cases 1 and 3 died; but the doctor did not state the dose administered in either case. Now this article may have one of two effects upon the profession; first, it may deter physicians from using the hypodermic syringe in cases where it would be the means of saving life; and, secondly, it may induce others to use morphia hypodermically in doses large enough to destroy life. I have used morphia hypodermically for the last ten years, and have not had a single bad result, other than an occasional inflammation at the point of introduction. My rule has been to always commence with a dose one-third the amount I would have given internally, and never without atropia.

Prof. R. Bartholow, in his excellent work on Hypodermic Medication, says, on page 41: "The dose of morphia for hypodermic injections varies from $\frac{1}{4}$ to $\frac{1}{2}$ of a grain. In

commencing it should not exceed *one-third* of that ordinarily administered internally. It is prudent in all cases to test the physiological capabilities by a moderate dose before resorting to the maximum amount. Women are, as a rule, more easily affected than men; $\frac{1}{2}$ of a grain is a sufficient dose for many of the conditions requiring an injection. Maximum doses may be administered with safety if combined with atropia." And on page 102, "atropia in small doses— $\frac{1}{8}$ of a grain—increases the hypnotic power of morphia. The pain-relieving power of morphia is increased by atropia. When toxic doses are used, the narcotism of morphia is overcome by atropia, and vice versa." Prof. H. C. Wood, of Philadelphia, in his work on *Materia Medica*, page 218, says: "I have seen very alarming results from the injection of one-sixth of a grain, and one-half a grain has produced death. In females, unless very robust, the maximum dose should be $\frac{1}{8}$ of a grain; in men one-sixth to one-quarter."

With the evidence given, and the effects of one-fourth of a grain upon the doctor's patient, the reader will be able to answer the question that heads this paper.

Du Quoin, Ill.

JOHN MCLEAN.

For the information of the reader who desires to answer the foregoing questions, I may state that, in the case which I reported, the dose was not large enough to relieve the pain for any considerable time, and it was not sufficient to cause sleep.

The writer fears that the report will have the effect, either to encourage the use of the medicine in excessive doses, or to deter physicians from administering it by the hypodermic method when it may be needed.

Certainly the unfortunate result from one-fourth of a grain cannot induce physicians to give larger quantities; and as to the second criticism—if the report induces greater caution in the administration of remedies, it will have accomplished the end for which it was intended.

Regarding the usual dose of morphia, and the dangers from hypodermic injections, I will have something to say in a future number.

E. FLETCHER INGALS.

Summary.

I. GYNAECOLOGY.

INFLUENCE OF ALCOHOL UPON THE QUALITY OF THE NURSE'S MILK.—Verney. (*Jour. de Méd. et de Chir. prat.* Sept., 1877, p. 417.)—The author, in discussing the influence of alimentation upon the quantity and quality of milk, gives the details of two cases which indicate very clearly that the excessive use of wine by the nurse is dangerous for the child at her breast.

In the first case, observed by Charpentier, a three-weeks-old infant, whose nurse seemed to be in excellent condition, after thriving up to a certain date, began to be agitated and ener-vated upon each occasion when it was put to the breast; it ceased to sleep, had a reddened aspect and lost that contented expression of the child which is properly fed. And yet the nurse had an abundance of milk, very rich in globules. After several days, the child being then five weeks old, it exhibited a copious rash upon the face, the neck and portions of the trunk ; the agitation which followed each application to the breast persisted and a real convulsive attack followed, which could not be explained by any of the causes usually operative in such cases. After an exceedingly careful investigation, it was finally discovered that the nurse, finding the large and vigorous infant capable of exhausting her supply of milk, which had already been furnished for nine months, had, in order to increase the quantity, drunk four bottles of wine daily. This amount she had tolerated so well, as not to excite the suspicions of her mistress. Charpentier concluding, hence, that the child was suffering from alcoholic intoxication, had the nurse placed under surveillance and limited daily to a half-bottle of wine, a bottle of beer and a litre or two of barley-water, with a nutritious diet. In a few days, the infant

completely recovered its health, the agitation and convulsions ceased and the rash disappeared.

Verney cites a similar case where convulsions of the infant resulted from the alcoholic habits of the nurse, who drank from six to eight glasses of wine daily, and one during the night. The convulsions resisted bromide of potassium, musk, baths, calomel and belladonna, and yielded only when the nurse was restricted in the quantity of wine imbibed.

EXCESSIVE CAUTERIZATION OF THE CERVIX UTERI.—J. Wallace. (*British Medical Journal*, 1877, Oct. 6.)—In our days the application of caustics to "an ulcer of the womb" has become such a routine practice that the following observations of Dr. W. may well merit our attention: "What are the immediate pathological results of weekly or bi-weekly applications of the nitrate of silver, which is the agent in most favor with practitioners, to the os tineæ? Inflammation and ulceration, lit up again and again by each application, followed in some instances by atrophy, and in others by hypertrophy of the cervix, with hard, painful cicatrices, and more or less contraction of the tissues and closure of the os, or even complete obliteration; endocervicitis and endometritis, the mucous lining of the cervical canal being more or less destroyed, and an ulcerated irregular surface remaining instead. Secondary functional derangements of the uterus follow, manifested first by dysmenorrhœa of a metrorrhagic character; and as the obstruction increases, regurgitation of the menstrual fluid takes place through the fallopian tubes, setting up ovarian, perimetritic, and general pelvic inflammations, with all their subsequent miseries.

The portio vaginalis uteri in some cases is so destroyed by caustics, that a hard, depressed cicatrix alone remains of it, and this is generally painful to the touch; the os is small, but not sufficiently so to account for the severe dysmenorrhœa. In such cases, the mucous membrane of the cervical canal is disorganized, and covered with uneven granulations, which bleed on the most gentle touch of the sound, and are so

actually sensitive, that I have frequently found it necessary to give chloroform before it was possible to examine the condition of the uterus. In a case under my care lately, the canal was tortuous from these excessive granulations; yet, on passing the speculum, the mucous membrane of the cervix seemed free from all inflammatory irritation, and it was only by a minute examination of the canal of the cervix that it was seen to be denuded of healthy membrane, while a careful digital examination revealed to the touch irregularities marking the different cicatrices. Sexual intercourse could not be tolerated; uterine pain was ever present; and although she had been cauterized externally and internally by various practitioners during a period of several years, no relief was obtained. The cicatrices were clearly seen with the aid of a duck-bill speculum. This uterus has never been impregnated, yet it measured fully two and a half inches, although its vaginal portion had been destroyed to more than half its extent. Relatively, it was enlarged from menstrual obstruction. Free division of the cervix cured this case.

Painful cicatrices, atresia uteri, and loss of sexual desire are mentioned as the chief evil consequences of excessive cauterization. In conclusion, W. says: "Repeated cauterisation is not necessary to produce healing, for the severe ulceration produced by potassa fusa on the lips of the uterus will heal in from four to six weeks without any subsequent cauterization whatever. It is only necessary to direct the patient to use the vaginal douche daily, either warm water, carbolized water, sulpho-carbolate of zinc, or whatever astringent in solution that may be deemed suitable. The occasional passage of the sound during the healing process will obviate any tendency to atresia."

The treatment may be summarized thus: 1. "For painful cicatrices, divide the cervix freely; if that fail, remove them by excision. 2. For recent atresia, use rapid dilatation; for atresia of old standing, free division with the scissors and uterotome; simple medicated dressing afterwards, if there be endometritis. 3. The sound should be passed a week before each menstrual period for three or four months, to prevent reclosure."

THE ABSORPTION OF CERTAIN MEDICAMENTS BY THE PLACENTA AND THEIR ELIMINATION BY THE URINE OF NEW-BORN CHILDREN.—Porack. (*Journal de Thérapeut.*, Sept. 25, 1877.) The substance first employed by the author was the iodide of potassium, because of the readiness with which it may be recognized in the urine. He administered the potassic salt a few moments or hours before delivery, and examined several times consecutively the urine of the child in order to establish its elimination.

The following conclusions were obtained from his first experiments:

1. In doses of twenty-five centigrammes, the iodide of potassium constantly passes into the urine of the new-born child, more promptly when the dosage is increased.
2. More than half an hour is requisite for the drug to traverse the placenta; after an interval of forty minutes, the characteristic reaction can always be detected in the urine of the new-born child.
3. When the urine is collected immediately after birth, and the reaction is compared with that obtained in urine collected some hours after, the first reaction is always the more feeble. This reaction is never obtained in the urine of the still-born child. The eliminating activity is therefore developed only after birth. Before delivery the placenta is an organ of absorption and elimination for medicaments temporarily penetrating the foetal organism.
4. When twenty-five centigrammes of the iodide of potassium are given to a woman in labor, the quantity absorbed by the placenta is small, and its elimination by the urine of the new-born child rapid.
5. When fifty centigrammes (and particularly one gramme) are administered to a woman, elimination by the kidneys of the child is always much more retarded than by those of the mother. While it is generally true that the total quantity of the iodide is eliminated by the mother in thirty-six hours, it is not rare to find the elimination by the child incomplete by the fourth day. In two cases it was not completed by the fifth and sixth days.

The importance of the slow elimination of the medicament by the child after treatment of the mother in labor, or of the nurse, lies in the fact that, if the elimination by the former is less rapid, the accumulation is greater, and thus the child more speedily presents the phenomena of intoxication.

RELATIONS OF PREGNANCY TO SURGICAL AFFECTIONS (*Centralbl. f. Chirurg.*, 1877, No. 26; from *Bull. de la Soc. de Chirurgie*).—Verneuil, after alluding to the vast contributions made to surgical science within the last few years, remarks upon the necessity of having certain doubtful points cleared up, among others that concerning the reciprocal influence of pregnancy and surgical affections. To the solution of the question Verneuil contributes full notes of nine observations, which cannot be quoted for want of space. The conclusions which he draws are formulated as follows: Pregnancy and surgical affections (traumatic or of other kinds) may occur at the same time without in any way influencing each other. On the other hand, surgical affections may give rise to death of the foetus, or miscarriage. Pregnancy, moreover, although in itself pursuing a normal course, may give rise to surgical affections (as for instance the occurrence of phlegmonous dacrocystitis), modify the course of others unfavorably, and give a peculiar unhealthy look to wounds of all kinds. In addition, concludes Verneuil, the unfavorable course of local affections during pregnancy may react upon the latter in the same manner. This unfavorable condition of local affections is so apt to change for the better after delivery, that Verneuil thinks the question may sometimes arise whether the production of premature labor might not be desirable.

ETIOLOGY OF FIBROID TUMOR OF THE UTERUS.—F. Englemann, (*Centralbl. f. Chirurgie*, No. 27, 1877 from *Zeitschr. f. Geburtsh. und Gynäkologie*, Bd. i. Hft. i. p. 130) notes three hundred and sixty-two cases of uterine fibroid, of which sixty-five have come under his own notice, and the remainder under that of his father, and compares them with the observations of other writers. Married women, according to E.'s statistics,

are more frequently the subjects of this affection than the unmarried, 5.1 to 1. (According to Winckel the proportion is 9 to 7.3.) Both observers find the affection most frequent between the ages of forty and fifty. In nearly one-half the cases, the earliest symptoms appeared between the thirtieth and fortieth years. Among the married women 26 per cent. were sterile. Among the married women who had borne one or more times before the appearance of the symptoms, eleven never conceived afterwards, seven underwent one or more abortions, and twelve bore living children.

By taking advantage of especial opportunities, E. found among his sixty-five cases, in thirty-two no positive data; in the remaining thirty-three, he thought himself justified in twenty-six cases in attaching importance to the assertions of the patients relative to the origin of the disease. Together with abortion, inflammation of the abdominal region (six), and difficult labor (three), typhus, strain, fall, catching cold, dancing, climbing, agitation of the mind, and "diseases" were believed to be causes of the fibroid development. E. found the baths of Kreutznach effectual in removing the growth in a number of instances.

II. SURGERY.

A FENESTRATED BANDAGE FOR THE LEG, AFTER PIROGOFF'S AMPUTATION.—Prof. Dittel. (*Wiener Med. Wochenschrift*, 1877, No. 16.)—The piece of the os calcis, which after Pirogoff's amputation is to unite with the lower end of the tibia, has a great tendency to slide down, and it taxes the surgeon's attendance a good deal to prevent such displacement. Most surgeons think this displacement is caused by the tractions of the tendo Achillis. Dittel, however, is of the opinion that it is simply caused by the weight of the bone; as the patient usually is lying on his back, the os calcis is pulled downward by its own weight. D. thinks this displacement can be obviated by the following dressing: the bones being well adjusted and the edges of the wound being united by catgut sutures, the proper position of the os calcis is temporarily

ecured by a broad strip of adhesive plaster, which, applied to the calf of the leg, is carried down and over the stump to the anterior aspect of the leg, to terminate at the crista tibiæ. The permanent bandage is then made with several strips of a plaster-of-Paris roller, which follows exactly the course of the adhesive plaster. These longitudinal strips are finally held in place by circular turns, some made a few inches above the ankle and some at the crista tibiæ. When this bandage has become dry and hard, the patient can assume any position without fear of disturbing his wound. The bandage must be removed if it becomes too loose or too tight, but in some cases the author had no occasion to meddle with it until the wound was firmly healed.

HYDATID TUMOR OF THE KIDNEY SUCCESSFULLY TREATED BY ASPIRATION.—Bradbury. (*British Med. Journal*, 1877, Oct. 6.) A boy, aged 8, was admitted into the hospital on July 5th, 1876. His only complaint was of an enlarged abdomen. A large tense elastic swelling occupied almost the whole of the left half of the abdomen, which was absolutely dull on percussion. Superiorly the percussion-dullness extended to within one inch and a half of the nipple in the nipple-line, and tracing it to the right, it became separated from the liver-dullness (right lobe) by a band of well-marked resonance. It then passed down, about one inch and a half to two inches to the right of the mesial line and lost itself below in the dullness of the (full) bladder. On tracing it to the left, the dullness reached as high as the left rib in the axillary line, but at this level it did not quite extend to the spine. The whole of the left hypochondrium was filled with the tumor, and there was complete dullness down to Poupart's ligament. The percussion was tympanitic over the rest of the abdomen. At the upper part of the tumor the "repercussion thrill" could be obtained. The heart's apex beat immediately beneath the nipple, just under the fourth rib; heart and lung sounds, urine and liver were normal.

On July 6th, the needle of an aspirator was introduced into the tumor, and forty-four ounces of hydatid fluid were drawn

off. No hooklets were found in it. After the operation the boy vomited several times, had slight fever, and an eruption of urticaria; but no tenderness of the abdomen. The urine was found to contain albumen, due to the presence of pus. July 15th, the abdomen was enlarging again. When the boy was made to sit up in bed he complained of pain in the loins, and four of the lumbar spines were found to be prominent, and the skin over them reddened. They were very painful on pressure. The tumor was aspirated again, and thirty-one and a half ounces of a greenish opalescent fluid were withdrawn, which, in the latter stage of the operation, was flaky and apparently purulent. After standing, the fluid deposited two ounces of pus. Under the microscope, pus-cells and the heads of numerous echinococci armed with hooklets were detected. The boy vomited again several times after the operation, but no urticaria followed the second puncture. On July 25th and 26th small cysts with hooklets were found in the urinary sediment. From this time the patient became gradually better. In November he was discharged from the hospital and kept under observation for some months. When last seen, he was quite well, the abdomen being perfectly normal and the urine free from pus and albumen.

EPIHELIAL CANCER TREATED BY DILUTED SOLUTION OF SODA.

—Prof. Busch.—(*Allgemeine Wiener Mediz. Zeitung*). The commencement of the epithelial cancer of the face is in many cases a simple proliferation of the epithelial cells of the external layers. Under certain circumstances the pressure of the external horny layer will cause atrophy of the papillæ underneath. In other cases, particularly in old age and in cases of constant irritation (chimney-sweeps), no epidermis is formed; the rete mucosum is exposed, and we have an *ulcus rodens*. If this horn-like layer of epidermal cells which obstructs the road for the succeeding cell formations is removed in a gentle manner, we can prevent the further growth of the cancers. This can be done by washing off the epidermoidal masses with a diluted solution of soda. Therefore, in the first stages of the facial and labial cancers, a cure can be accomplished by alkaline lotions.

This treatment is also sometimes successful in cancers that have existed for some time; and after the excision of a cancer a relapse can frequently be prevented by washing the scar with alkaline solutions.

Paget had observed that cancer may follow an excessive accumulation of the epithelial cells on the surface of the mamma.

Langenbeck also observed that he had seen very favorable results from the application of Emser thermal waters to cancerous ulcerations.

ON THE REGENERATIVE PROPERTIES OF THE PERIOSTEUM AND ITS PRACTICAL APPLICATION.—Von Langenbeck. (*Centralblatt für Chirurgie* No. 22.)—When the periosteum of a bone has been removed, to a considerable extent it will be replaced by new periosteum, without necrosis of the bone occurring. If this new periosteum is deprived of its bone, the bone will also be replaced. This has been proven by experiments of Bernhard Heine.

Experience teaches Langenbeck that this re-produced periosteum possesses great vitality; and that for plastic operations the integument, that has become adherent to the bone, when removed with its periosteum, is of great value.

The author relates the history of two cases in which, through accident, the skulls were injured so that large openings were left in the cranial cavities. In these cases, L. used the integuments of the scars, with its periosteum, to cover and close the openings, and obtained the best results. He also related the case of a person who had lost a portion of the hard palate through syphilitic ulcerations. By using the tissue of the scars left, he succeeded in a partial restoration of the bone, while he had failed by using portions of the regular muco-periosteal lining or integument from unaffected portions of the mouth. Gangrene of these cicatricial flaps only occurred in anaemic individuals that should have had a previous tonic treatment.

III. PRACTICAL MEDICINE.

TREATMENT OF NEURALGIA BY HYPODERMIC INJECTIONS OF NITRATE OF SILVER.—Le Dentu. (*La France Médic*, 1877.)—The author has recently reported to the Society of Clinical Medicine several cases treated successfully by the method first suggested by a M. Luton.

A young woman suffered for four months from a neuralgia of the radial nerve which had been treated in all possible ways. In view of this want of success, Le Dentu decided to inject subcutaneously in the cellulo-fatty tissue found in the middle third of the external face of the arm, seven drops of a solution of nitrate of silver (1 to 4). The result was that an intense pain succeeded immediately the pain of the neuralgia, the latter not once recurring after the moment in which the injection was made. On that and the succeeding days a very painful swelling invaded the arm and the upper part of the fore-arm with an oedematous and subsequently phlegmonous tumefaction at the site of the puncture. After nine or ten days an abundant sero-pus flowed from the latter, but the suppuration gradually diminished and the cure was finally complete. Two months afterward it was ascertained that the relief was absolute.

Having had since then no opportunity to make further trial in obstinate neuralgias of Luton's method, the author concluded to employ it in painful affections of another kind. A man who had been castrated on the right side and had been relieved by the operation, was tuberculous and suffered from frequent haematuria, violent pain in the glans penis and in the lower part of the belly and lumbar region, the permanent pain being aggravated during and immediately after micturition, but never entirely ceasing. The lumbar and testicular pain disappeared under the influence of punctate canterizations, but the hypogastric neuralgia persisted. Le Dentu then made a subcutaneous injection into the hypogastric region, of four drops of a solution of the nitrate of silver (1 part to 5). Very intense pain resulted with phlegmon and suppuration on the fourth day. Quite thick pus escaped after an opening was

made. But in nine days the patient was quite satisfied with the result, for although he still suffered from the pain during micturition, it had completely disappeared during the interval.

Again in a patient with scapulalgia, where punctate canterization had effected no result, an injection of four drops of the same solution into the connective tissue immediately in front of the painful region, was followed by intense pain; local suppuration and an abscess on the fifth day. But on the second day after the injection the deep seated pain was completely relieved, and movement of the limb was readily effected.

Le Dentu concludes with the remark that he has always seen a small abscess result from the operation, but that by opening the former prematurely—say on the fourth or fifth day, this inconvenience would be much lessened.

GASTRIC AND INTESTINAL GASES, WITH FLATULENT DYSPEPSIA.—Leven. (*L'Union Méd.*, Oct. 11, 1877.) The following are the author's conclusions:

Alimentary substances do not seem to produce gas; that which is found in the digestive tube is derived from external air, blood or fecal matter. The gases produced in flatulent dyspepsia are not due to the decomposition of alimentary substances, but are derived from the three sources mentioned above. They are kept in continual motion by the pathological contraction of the muscular fibres of the intestine; they are continually renewed; their production may be incessant, as well in an individual who is fasting, as in one who is nourished.

This symptom, production of gas, signifies, therefore, an intestinal irritation which is always consecutive to a prior gastric dyspepsia.

The course of the disease and the treatment requisite to cure it, confirm these clinical facts.

There is no necessity for seeking a medication to relieve the gas, and, as for the powders, such as charcoal, which are said to absorb it, they actually have no such effect, as the author has proved by experiment. A block of charcoal, it is true, may absorb gas, but as soon as it is reduced to powder it loses its absorptive power.

A NEW INVESTIGATION OF THE RÔLE OF THE ALKALIES IN THE ANIMAL ECONOMY.—Mialhe. (*L'Union Méd.*, Oct. 11, 1877.) The fact of the indispensable necessity of the constant presence of the alkalies in the animal economy was first established, in 1824, by Chevreul; but he attributed this to a need of the caustic alkalies, while it should be properly referred to the alkaline bicarbonates.

In the present state of science we are authorized to say that the influence of the alkalies upon organic matters, which renders possible their oxydation in the sphere of the animal economy, can no longer be questioned. This the author has demonstrated in several memoirs on digestion, assimilation and organic or vital oxydation. Inorganic bodies certainly exist in the organs of animals, and these exhibit an indisputable activity; such are iron, phosphate of lime and the alkaline bicarbonates.

Resting upon these facts, Mialhe endeavors to solve the question: Can the alkaline bicarbonates, when administered in large doses, give rise to a special cachexia, designated as the alkaline cachexia? This question he answers in the negative, and concludes with some general considerations relative to the administration of the alkalies.

What is proposed by the administration of the sodic bicarbonated waters? The end desired is the introduction into the blood of a proportion of the bicarbonate of soda, sufficient to sensibly modify the intimate composition of the albuminoid materials with which the alkaline element enters into combination; and, as a result, the stimulation of the phenomena of organic or vital oxydation, as well as that of endosmosis and exosmosis, with a view to modify the nature of secretions, etc.

What, now, is the proportion of the bicarbonate of soda which it is proper to introduce into the economy, in order to produce this result?

It is impossible to give a categorical answer to this question, because the proportion of the alkaline base which exists in the animal economy, whether in the state of the bicarbonate or of the albuminate, is far from being always the same, not only in the animals of the two great classes, the herbivora and the carnivora, but also in animals of the same species. Thus the

herbivora have their humors alkaline in a different sense from the carnivora, whence it follows that man, who is omnivorous, should occupy a middle ground between the two, and, from the point of view of his humoral alkalinity, approach either the herbivora or the carnivora, according to the nature of his alimentation. This is precisely what occurs. The inhabitant of the city, the wealthy individual, has need of a larger dose of alkali to restore his humors to a physiological state, than the person who lives almost exclusively upon a vegetable diet.

The function of the skin should not be neglected. The practitioner should remember, in prescribing alkalies, that a patient who perspires, loses a portion of his acids from his economy, and to be properly "alkalized" he requires a less proportion of alkaline base.

Neither should it be forgotten that a patient living much in the open air and performing much muscular exercise, in order to be "alkalized," requires a smaller quantity of the bicarbonate than the patient who leads a life of inaction. Account must be had, likewise, of the elevation of the temperature, since this favors the alkalization of the economy, in the manner (without doubt) of enforced exercise; and also because it acts upon the nervous system to such a degree that patients find such medication almost intolerable in the hot season.

The author believes it proper to administer the maximum dose which it is proposed to employ, at once and continuously throughout the treatment. This should be in fractional doses, because it is essential to maintain the economy always at the same degree of alkalization. Hence the importance of frequently examining the urine with litmus paper, in order to be assured of the chemical condition of the former, for nothing is so interesting to the physician as a knowledge of the chemical medium in which are accomplished so many of the mysterious morbid phenomena he is called upon to treat.

Claude Bernard recently announced to the French Academy that sugar was a vital, constant and necessary element of the blood. Mailhe adds that it is his conviction that the alkaline bicarbonates constitute a permanent and necessary element, not only of the blood but of the entire economy.

THE CAUSE OF SCORBUTUS.—Gubler. (*La France Médicale*, July 25, 1877.) For a long time it has been generally admitted that the epidemics of scurvy so frequent in distant maritime expeditions result from lack of fresh vegetables. In studying the report of the English commission on the causes of the epidemic of scurvy among the crews of the *Alert* and *Discovery*, M. Gubler was struck by this fact: that the epidemic declared itself with intensity at the moment when the sailors had resumed an active and fatiguing life on land, after a prolonged repose or very moderate labor aboard ship, at the same time that they were absolutely deprived of fresh food, consisting of beef and lime-juice.

For it is to be observed that fresh foods, meat or vegetables, oppose a real obstacle to the development of scurvy, even under the most disadvantageous conditions, and that vegetables do not alone possess prophylactic virtue, although they possess it in a high degree.

The problem propounded by M. Gubler is: what is the rôle of fresh foods? To what principles do they owe the property of protecting the system from the profound alterations which characterize scurvy? Examining the composition of lime-juice, the learned professor remarks that although citric acid predominates, there is also present a certain quantity of mineral substances, and principally potassa, an alkali which exists normally in the animal fluids, and forms one of the indispensable elements of the globules. Lime-juice may then, in a certain measure, take the place of fresh vegetables, by its two principal elements, organic acid and potassa.

These two elements are also found in fresh meat in less proportion; its reaction is acid, and the salts of potassium are present in notable quantity. Salted meats lose their prophylactic virtue because their acidity disappears, and the salts of potassium dissolving in the brine, are replaced by the salts of sodium in excess. This explains the difference in properties, as regards scurvy, which distinguishes fresh from salted meats.

If the theory of M. Gubler is true, and at first sight it is plausible, navigators should provide themselves either with

wine charged with its tartar, or with organic salts of potassium, which in small volume represent enormous quantities of fresh vegetable matters. It is an experiment easy to make.

L. W. C.

MORPHINISM.—A. Spillman. (*Archives Générales de Médecine*, Aug., 1877.) Dr. Levinstein designates under this name a pathological state which has become frequent enough since the vulgarization of subcutaneous injections of morphine by the aid of the Pravatz syringe. The symptomatology of morphinism is about the same as that of alcoholism, even including the delirium. This affection is quite common among the better classes. Patients suffering from it are attacked with trembling, hallucinations, inflammatory phenomena of the lungs and intestines.

Morphine becomes indispensable to those who make use of it to ease the slightest ill-feeling or ennui. But the more they use it the shorter the intervals of calm become.

The three patients whose cases Dr. Levinstein publishes, had become habituated to injections of morphine for several years, and had reached the quantity of more than 15 grains a day. The phenomena observed were: hyperesthesia, neuralgias, insomnia, anxiety, depression alternating with moments of excitement, muscular contractions, and dryness of the tongue. The intelligence and the memory did not seem to be affected.

When morphine is suppressed, either suddenly or gradually, there follows feebleness, trembling, chills, a pronounced coloration of the face, and abundant perspiration.

The prognosis of morphinism is generally serious enough. The patients soon resort to the means which have procured them relief heretofore, or they succumb to marasmus.

The author cites two cases of patients who committed suicide, and five who have given themselves up to alcoholism.

As regards treatment, the author thinks it impossible to suppress the morphine gradually; it is better to suppress it abruptly and to resort to stimulants, as wine or subcutaneous injections of ammonia, to combat collapse. In all cases the subjects of morphinism should be considered and treated as

alienated. Subcutaneous injections of morphine administered by the physician are safe, but in the hands of the patient may become fatal.

Dr. Weinlechner has published a case of a physician who had employed injections of morphine to relieve the pains of a periostitis. The patient had arrived at the point of self-injecting $2\frac{1}{2}$ grammes of morphine a day. His nervous system was considerably shattered, and he was covered with small cutaneous abscesses. He had fallen into a state of complete marasmus.

The subcutaneous injections were suppressed, and replaced by inhalations of chloroform. Recourse was finally had to iodide of potassium, which was followed by almost complete cure.

In a later article, Dr. Levinstein has published a new case of acute poisoning by morphine. It was a lady who had received for the first time an injection of $4\frac{1}{2}$ grs. of morphine. At the end of 20 minutes she had vertigo, was semi-comatose, the pupils were strongly contracted; pulse, 92; respiration, 24. An injection of .0015 grm. of atropine was then given, and repeated twice. The pupils dilated, but the patient fell into a state of somnolence, and the face presented a deep red coloration. Coffee was then given internally, ice applied to the head, leeches to the mastoid processes and in the nostrils. For the somnolence, she was placed in a warm bath. The respiration fell to four in the minute. Electrization of the phrenic nerves was then resorted to. The patient remained completely inert, and fell into a profound sleep. In half an hour the respiration fell to three in the minute. However, the patient awoke for a moment to fall into a profound sleep interrupted by vomiting. The serious results of the poisoning only disappeared at the end of 12 hours, when she recovered consciousness. For 15 days she remained completely prostrated, and only recovered little by little her intelligence and the use of her members.

The urine obtained by the catheter offers the following reactions: treated with soda and sulphate of copper, it presents a blue color; on heating, the hydrated oxide of copper dissolved in the urine is reduced to the state of insoluble oxide of copper;

on adding an alkali and bismuth, a black color is obtained on heating. The angle of polarization is deviated to the right 2.3 deg. At the end of several hours the urine presents all the characters of normal urine.

Dr. Levinstein has completed his studies on morphinism in a recent communication. After having found sugar in the urine of patients suffering from morphinism, he has found albumen. This albuminuria persists for months, even after morphine has been completely suppressed, and when all the other symptoms have disappeared.

All the patients do not become albuminuric; the presence of albumin seems to be in relation with the duration of the use of morphine, and the size of doses employed.

Experiments on animals prove to the author that morphine, given in doses of two to five decigrammes, produces a rapid albuminuria in dogs.

As patients accustomed to the use of morphine injections may seek to deceive the physician, it is well to analyze the urine by Dragendorf's method. One may thus determine the proportion of morphine absorbed. A patient whose urine still contains morphine eight days after the suppression of the drug, must certainly have continued the injections of morphine.

I have been able to prove, in part, the assertions of the author, in a lady of about 50 years who had been advised six years ago to use morphine for the pains of intercostal neuralgia. Since this time the lady had made six to ten injections daily, using thus about 200 grammes in a year. She appears at present like a living skeleton; the appetite is gone, the limbs and head agitated by continual trembling. She is incapable of the least exertion; the least noise agitates her; she avoids the light, and has amblyopia. All means, menaces, persuasion have been employed to induce her to stop this evil habit, which she would only abandon to seek suicide.

The urine of this patient contains a considerable proportion of sugar, but no albumin.

Physicians cannot be too careful in retaining that dangerous instrument, the hypodermic syringe, exclusively in their own hands.

L. W. C.

CASE OF CHRONIC CHLORAL POISONING.—T. Inglis. (*Edinburgh Med. Journal*, Sept., 1877). A man, aged 47, was admitted to the Royal Edinburgh Asylum with the following history. About seven years ago he was ordered by his physician a mixture containing the hydrate of chloral and the bromide of potassium, in order to relieve a spasmodic retention of urine. He took about a drachm of each of these drugs daily for six years regularly, and during this time neither he nor his friends observed any hurtful effect. But the drug so enslaved him that he had a craving for its sedative effect. Six years afterwards he had an attack of bronchitis, and took chloral to allay the breathlessness and procure sleep. The recovery was rapid, but business care brought on some mental depression, and he sought oblivion in chloral. At first a 60-grain dose was taken, but was gradually increased till he took 180 grains per diem. He carried a bottle with solution of chloral in his pocket and took a dose of ten grains every hour, or every half-hour; and if he chanced to waken at night he repeated the dose. Sleep was not induced, but a soothing feeling. He complained of no headache, vertigo or depression as the result of the drug, but a feeling of lassitude and nervous debility and exhaustion arose, together with an inaptitude for work and incapacity for continuous thought. His appetite declined, food lost its relish; nausea and sour eructations were complained of, and vomiting occurred frequently. He had slight jaundice; the faeces were hard and white.

As he abandoned chloral eating, he became untruthful, deceitful, irritable and passionate. The natural affection for his wife and children became blunted; he lost his regard of duty and self-respect. When he discontinued using the chloral he took to whisky. He did not take enough to produce complete intoxication, but sufficient to keep him in a chronic state of confusion. He became violent and unmanageable, and threatened suicide. Diarrhoea set in, and was followed by a great discharge of blood from the bowels. Then he got into a state of delirium tremens, which terminated by three severe epileptiform attacks following each other at intervals of four hours.

On admission he appeared prematurely old and broken-down; he was perfectly silly and childish, and almost imbecile in manner. He would laugh and cry alternately without adequate cause; took no interest in what was going on around him; his memory, almost obliterated; his answers, incoherent. There was persistent muscular tremulousness of the upper and lower extremities; power of co-ordination was lost, and he was unable to walk alone. The tongue was furred in the centre, tremulous and pointed markedly to the right side. Articulation was impaired. The pupils were dilated, irregular at the margins and insensible to light. The right side of the face was partially paralysed; the reflex action of the cord was much impaired. He complained of restlessness and exhaustion, but had no headache or neuralgic pains. Respiration and circulation normal. No albumen, sugar, bile or tube casts in urine.

No chloral or any narcotic was given after admission. Was ordered a tonic mixture containing strychnine, strengthening diet, and as much exercise in the open air as he could bear. The regular action of the bowels was promoted by a gentle aperient. The appetite for food returned slowly, but he gained in flesh and appearance very rapidly. The tremulousness and paralytic symptoms disappeared in an astonishingly short time. Pupils remained dilated for about three weeks, but their outlines became regular, and they contracted normally under the influence of light in a few days. Mentally his convalescence was equally speedy. Memory and coherent thought soon returned. After a short stage of stupor his intellect regained strength by degrees, and his emotions and affections resumed their natural condition. He was discharged three months after admission.

IV. THERAPEUTICS.

CROTON-CHLORAL.—*La France Médicale*, July 25, 1877.—Dr. Livon, in a recent study of this drug, at the physiological laboratory at Marseilles, arrives at the following conclusions:

This remedy is destined in the hands of physicians, to render as great service as chloral has done. The author does not regard it as a sovereign remedy as it may fail in certain cases, but it relieves pain, and in less doses than chloral, 10, 20, or 30 centigrammes being sufficient to soothe neuralgic pains without profound and forced sleep. Liebreich had already noticed this special action upon the sensibility of the head, but he regards it as perfectly innocuous to the stomach and other organs, while Livon recognizes its irritating and caustic properties, and says it is best not to give it by the mouth in inflammatory states of the digestive system. In patients who have a tendency to cerebral congestion, it is best to abstain from the use of croton-chloral. In case of accidents, artificial respiration should be used, and electricity along the spine and over the course of the pneumogastric.

It is not dangerous to the heart except in large doses. The difference between its action and that of chloral is such that Liebreich advises its use instead of chloral in subjects with cardiac disease.

From all his observations and autopsies, Livon draws the following conclusions:

1. Croton-chloral acts upon the central nervous system.
2. In small doses it acts upon the brain alone, and by its intermeditation solely upon the sensitive cranial nerves.
3. In larger doses, its action extends to the cord and sensitive spinal nerves.
4. The motor nerves are only acted upon secondarily.
5. It is only in exaggerated doses that the arrest of the heart's action, and of respiration, may be provoked by cessation of nervous afflux.

It may be given by the stomach or hypodermically. The author's formula for administration by the stomach is:

Croton-chloral,	-	-	-	2 grammes
Glycerine (warm)	-	-	-	6 "
Ext. licorice	-	-	-	4 "
Water } aa	-	-	-	45 "
Syrup }				

For hypodermic injection his formula is:

Croton-chloral	-	-	-	1 gr. 60 c.
Glycerine				
Cherry laurel water	} aa.	-	-	16 grammes

Each gramme of the solution contains 5 centigrammes.

Divided doses of 5, 10, or 20 centigrammes repeated as required several times in succession, generally succeed in quieting pain. From 50 centigrammes to 1 gramme instantly relieve pains of considerable intensity, and for very severe pain, the dose may be carried up to 3, 4 or even more grammes at once.

The author does not recommend intra-venous injections, on account of the difficulties and dangers that may follow.

For physiological experiments, however, intra-venous injections of croton-chloral made with care, at a certain distance from the heart, constitute a precious means for immobilizing animals destined for the most delicate and difficult vivisections.

L. W. C.

CROTON-CHLORAL FOR CILIARY NEURALGIA.—Friedinger.—(*Wiener Med. Wochenschrift*, No. 31, 1877.) Croton-chloral seems to have an almost specific influence on the sensory fibres of the fifth nerve, and it can be more surely relied upon to allay those fearful pains, which attend the violent inflammations of the iris and choroid, and are known as ciliary neuralgia. In all cases in which it was given for this neuralgia, it has exerted its anæsthetising effect without producing any collateral disturbance. This is the formula:

R Croton-chloral hydrate	-	-	1 grammie
Spir. vin. rectif.	-	-	4 "
Aq. destill.	-	-	150 "
Syr. aurant. cort.	-	-	15 "

1 tablespoonful every two hours.

BOOKS AND PAMPHLETS RECEIVED.

Cyclopædia of the Practice of Medicine. Edited by Dr. H. Von Ziemssen, Professor of Clinical Medicine, Munich, Bavaria. Vol. XVI. Diseases of the Locomotive Apparatus, and General Anomalies of Nutrition. By Prof. H. Senator, of Berlin; Prof. E. Seitz, of Giessen; Prof. H. Immermann, of Basel; and Dr. Birch-Hirschfeld, of Dresden. William Wood & Co.^{*} 1877. Octavo, pp. 1,060.

The Ear: Its Anatomy, Physiology, and Diseases. A Practical Treatise for the Use of Medical Students and Practitioners. By Charles H. Burnett, A. M., M.D., etc., etc. With 87 illustrations. Philadelphia: Henry C. Lea. Octavo; cloth. 1877; p. 606.

Forensic Medicine and Toxicology. By W. Barthust Woodward, M. D., F. R. S., and Charles Meymott Tidy, M. B. F. R. S. With eight full-page lithographic plates, and one hundred and fifteen other illustrations. Philadelphia: Lindsay & Blakiston. 8vo. 1877; pp. 1,083.

Practical Hints on the Selection and Use of the Microscope. Intended for beginners. By John Phin, editor *American Journal of Microscopy*. Second edition. New York Industrial Publication Company. 12mo.

Lectures on Practical Surgery. By H. H. Toland, M.D., Professor of the Principles and Practice of Surgery and Clinical Surgery in the Medical Department of the University of California. With numerous illustrations. Philadelphia: Lindsay & Blakiston. 8vo. 1877. pp. 506.

Transactions of the Medical Association of Georgia. Twenty-eighth Session. 1877.

Transactions of the Minnesota State Medical Society. 1877.

Annual Report of the City Registrar, of the Births, Deaths, and Marriages in the city of Boston, for the year 1876.

A New Method of Treating Fracture of the Clavicle. By Henry Van Buren, M. D.

Address delivered at the Third Annual Meeting of the Association of Alumni, and Officers of the Medical Department of the University of Buffalo. By Frank H. Hamilton, A. M., M. D.

Delaware State Medical Society. Session at Dover, Delaware, June, '77. Address of the President, John J. Black, M. D.

Long Island College Hospital. Annual Announcement and Circular. 1877-78.

École de Médecine et de Chirurgie de Montreal. Faculté Médicale de l' Université Victoria. Session 1877-78.

Changes in New England Population. By Nathan Allen, M. D.

Hospitals: their History, Organization, and Construction.

Boylston Prize Essay of Howard University for 1876. By W. Gill Wyllie, M. D. New York: D. Appleton & Co. 1877. 8vo. Cloth. pp. 326.

MICHIGAN STATE BOARD OF HEALTH.

The regular quarterly meeting of the Michigan State Board of Health was held in Lansing, on Tuesday, Oct. 9th. The members present were: Prof. R. C. Kedzie, Lansing; Homer O. Hitchcock, M. D., Kalamazoo; Henry F. Lyster, M. D., Detroit; Hon. LeRoy Parker, Flint; Rev. D. C. Jacokes, Pontiac; Henry B. Baker, Secretary.

Dr. Kedzie, committee on poisons, etc., read an important report on "Labeling Medicines." He gave many instances of poisoning by taking the wrong medicine through mistake because it was not labeled. He urged that every medicine, and every injurious substance which may be mistaken for medicine, should be distinctly labeled. "Never administer as medicine any substance of the composition of which you are ignorant or in doubt." The paper was accepted with thanks, and a committee, of which Dr. Kedzie is chairman, was appointed to investigate another branch of the subject in reference to danger from the dispensing of drugs or medicines by unqualified or inexperienced persons. This committee is to confer with the Michigan Pharmaceutical Association, which has already given attention to the subject.

Dr. Baker presented tables, diagrams, etc., on the subject of the death rate as relates to age, climate, etc. He gave tables and diagrams for the various States and Territories of the Union.

Leroy Parker, chairman of the committee on legislation, made a brief report relative to the subject of boards of health in cities and villages, and mentioned that since the last meeting considerable progress had been made in securing health officers for such boards. The secretary stated that the progress in this direction had been great, and it was largely due to Mr. Parker's efforts.

Dr. Baker's contributions to his paper have been the subject of "The New Englander." He has written much with reference to their health and the ill health of people to dampness in and about houses. He had issued a circular to the correspondents, and with this paper he presented the subject of the soil, as to tile, raining, sources of drinking water, &c., & the cellular disposition of decomposing organic matter, &c., & the humus in the several localities. He said that whenever the soil is not dry, there should be the least exposure in the cellar.

In the discussion which followed, Dr. Baker deemed it important that the sewer system should never communicate uninter-
mittently with the house, but the connection should be made in space, or otherwise freely ventilated on the top.

Dr. Baker also said that if box drains be used, they should be turned down, so as to be self-cleansing.

Dr. Baker also spoke of the persistence in efforts to resuscitate persons who had apparently been dead. He reported a number of cases where resuscitation was long time after they had apparently died. He claimed that deaths are constantly occurring, and that thorough efforts at reanimation, and that efforts are made daily, should be continued at least one instance where only after six hours did symptoms of life appear, and yet this person recovered.

The meeting closed with an outline of a report of the work of his department for the last quarter. It included the distribution of 1,000 copies of the document on "Restriction of Scarlet Fever"; sixteen hundred copies of the "Report of the Board"; and the printing of six copies of the "Department of the Drowned." Much attention was given to the transmission of Weekly Reports, &c., & a large amount of interesting correspondence had been transmitted.

Dr. H. F. Lyster read a continuation of his paper heretofore presented on the subject of "Healthy Homes." He considered the subject mainly with reference to their location and the measures to be taken to secure good drainage, and traced much of the ill-health of people to dampness in and about their dwellings. He had issued a circular to the correspondents of the board, and with this paper he presented the substance of about forty replies received, showing the nature of the soil, practice as to tile-draining, sources of drinking water, character of cellars, disposition of decomposing organic matter, etc., about the homes in the several localities. He recommended that wherever the soil is not dry, there should be tile drains around the house or under the cellar.

In the discussion which followed, Dr. Baker deemed it important that such drains should never communicate uninterrupted with a sewer, which may contain sewer gas, which will thus permeate the house; but the connection should be through an open-air space, or otherwise freely ventilated on the house side of the trap.

Dr. Kedzie said that if box drains be used, they should be placed with one corner down, so as to be self-cleansing.

Dr. Kedzie read a paper on persistence in efforts to resuscitate the drowned. He reported a large number of cases where persons had been resuscitated a long time after they had apparently ceased to live. He claimed that deaths are constantly occurring for lack of thorough efforts at resuscitation, and that whenever such efforts are made they should be continued at least two hours. He cited one instance where only after six hours of constant work did symptoms of life appear, and yet this person was completely restored.

The Secretary read an outline of a report of the work of his office during the last quarter. It included the distribution of about five thousand copies of the document on "Restriction and Prevention of Scarlet Fever," sixteen hundred copies of the Fourth Annual Report of the Board; and the printing of six thousand copies on the "Treatment of the Drowned." Much time had been given to the compilation of "Weekly Reports of Diseases," and a large amount of miscellaneous correspondence and other business had been transacted.

Hon. Leroy Parker read an abstract of papers read before the public health section of the American Social Science Association at Saratoga, which he had attended in the interests of public health in Michigan.

Dr. Hitchcock presented a report and abstract of papers read at the recent meeting of the American Public Health Association at Chicago.

At the last meeting ex-President Hitchcock presented an address by title, and at this meeting it was read. The subject was: "Heredity in its relations to the public health, and to legislation in the interests of public health."

A valuable paper on the diet of infants, by Dr. Arthur Hazlewood, of Grand Rapids, an ex-member of the Board, was accepted with thanks.

The Secretary read communications from Dr. G. W. Topping, of DeWitt, relative to reports of prevailing diseases; from Dr. O. Marshall, of this city, on the subject of opium-eating; from Dr. Edward Dorsch, of Monroe, on lead-poisoning from tin cooking utensils lined or glazed with lead; from Dr. C. W. Marvin, of Ithaca, relative to the recent increase of deaths from cancer; from Dr. J. D. Hull, of Allegan county, relative to drainage in his locality; from Dr. Batwell, of Ypsilanti, relative to sickness from damming the Huron river; from Dr. Charles H. Fisher, of Rhode Island, giving formula for preparation and an account of the first use of sulpho-carbolate of soda as a preventive in scarlet fever.

Dr. Lyster presented a paper on baths and bathing. He gave a history and description of all kinds of baths and their effects on the human body. His paper was also accompanied by numerous replies on this subject from correspondents of the Board to a circular which he had issued.

The Secretary presented his annual report in relation to the property of the Board.

During the year additions had been made to the library, 97 by purchase and 244 by gift and exchange. The library has now 931 numbers.

Medical News and Items.

KARL AUGUST WUNDERLICH, the well known professor and clinical teacher at Leipzig, Germany, is dead.

MARRIED—At West Brooklyn, Ill., by the Rev. C. H. Hoffman, Gustavus F. Schreiber, M. D., and Miss Lettie Morey, all of West Brooklyn.

THE LIBRARY of the Medical Press Association is under great obligations to Dr. Rauch, President of the State Board of Health, for the donation of the Transactions of the American Public Health Association.

CENTRAL FREE DISPENSARY OF WEST CHICAGO, CORNER WOOD AND HARRISON STREETS.—Statement of dispensary work for September: Vaccinations performed, 454; total number of patients, 1,329; number of visits of patients to the dispensary, 2,259; number of visits to the homes of patients, 343; total number of visits, 2,602; number of prescriptions furnished, 2,377.

MORTALITY IN CHICAGO DURING THE FOUR WEEKS ENDING OCTOBER 15.—Total number of deaths, 564; males, 312; females, 252; under one year, 142. Principal causes of death: Accidents, 19; apoplexy, 4; cholera infantum, 29; diarrhoea, 32; dysentery, 11; enteritis, 7; convulsions, 57; scarlatina, 37; variola, 5; diphtheria, 23; typhoid fever, 30; puerperal fever 2; phthisis, 56; pneumonia, 15; meningitis, 16; diseases of heart, 13; liver, 2; kidneys, 6.

WE HAVE RECEIVED a printed excerpt from the *Clinton County (Iowa) Advertiser*, of Oct. 11, 1877, giving the details respecting the arrest and punishment of a swindler styling

himself Dr. A. G. Walter (alias Williard, alias Bayreuz). He succeeded in fraudulently procuring thirty-one dollars and sixty-five cents from Dr. Chas. H. Lathrop, of Lyons, Iowa, on the ground that he had been commissioned by the "United States College of Surgeons, Washington, D. C."—an institution endowed by the general government for the purpose of relieving those afflicted with paralysis and epilepsy. Dr. Lathrop was suffering from paraplegia, and paid the sum named for the purpose of being enrolled as a patient in the institution which it was pretended had been established.

We fully sympathize with Dr. Lathrop, but must express the difficulty we find in understanding how a U. S. Examining Surgeon for Pensions, could be entrapped by such a flimsy and transparent device.

MILITARY SURGERY IN THE TURKISH ARMY.

An artillery-man had a limb shattered by an exploding shell at Sistova, and, incredible as it may appear to those unfamiliar with the organization of the Turkish administration, the unfortunate man had to be transported from Sistova to Constantinople. In spite of his terrible suffering he listened to the latest war news with the keenest interest. Amputation having been decided upon, authority to perform the operation was requested of the minister of war, for, in accordance with the curious customs which the student of the administrative régime of that country is always discovering, no amputation can be performed in a Turkish hospital without official permission. It, of course, frequently happens that the patient dies, while incompetent authorities are deliberating upon the formal demand of the surgeon. Our artillery-man was fortunate in having the consideration of the question respecting his leg conducted with exceptional rapidity, as a conclusion was reached in eight or ten days! The brave fellow who had waited to learn the good pleasure of the administration all the way from Sistova, did not complain of this delay in the least. He finally endured the amputation with heroic courage, and it is hoped he may be saved.—(Le Temps.)

The *Hospital Gazette* and the *Archives of Clinical Surgery* have been consolidated, and form a very creditable semi-monthly journal of twenty-four pages. A further reduction of the number of medical periodicals in this country would greatly enhance the character and value of our periodical literature.

THE LIST of licentiated physicians we publish in this issue, comprises practitioners in Chicago and Cook county. Only about 300 physicians in this county have, so far, complied with the provisions of the law.

In our next number we shall give the official list of licentiates from other counties.

On and after November 1st, the State Board of Health will be in session at the Grand Pacific Hotel, Chicago, to examine candidates for licence. And on the 15th of November, the board will hold a meeting in Cairo, for the same purpose.

UNDER THE HEAD of "Honors to an American," the *St. Louis Clinical Record* makes the following very severe statements, which, if true, ought to be very generally known, and if not true, ought to subject the editor of the *Record* to damages for libel:—

"Several of our contemporaries are giving great prominence to Dr. Sayre's very flattering reception in England. It seems that Dr. Sayre went to England to advertise his (*sic.*) method of treating spinal curvature. He intends to publish a book describing his (?) process and expects a large sale under an English copyright.

"This would be all very well—in fact, just as it should be—if Dr. Sayre had ever invented anything, which he never did, so far as we are informed.

"‘Dr. Sayre’s hip-joint splint’ was invented by Dr. Davis.

"‘Dr. Sayre’s plaster-of-Paris jacket’ was invented and first applied by Dr. Bryan, of Lexington, Ky.

"‘Dr. Sayre’s method of self-suspension in rotary-lateral spinal curvature’ was invented by Dr. Benj. Lee, of Philadelphia.

"Dr. Sayre's lectures on orthopaedic surgery' were by Dr. Louis Bauer, formerly of Brooklyn, N. Y., now of St. Louis.

"As a plagiarist and 'father of other men's ideas,' Dr. Sayre is without a rival. We are glad to see that our English cousins delight to honor such representative Americans (Heaven save the mark!) as P. T. Barnum and L. A. Sayre. *Vive le humbug!*"—(*Phil. Med. Times.*)

OPENING OF THE COLLEGES.—The regular session of the *Chicago Medical College* was opened with the usual public exercises, on the evening of the 1st inst. Prof. J. S. Jewell delivered the opening address. His effort was a variation upon the hackneyed subject for college openings of "how to succeed in the chosen profession." He spoke of "the course men usually take to fail in the profession," etc.

The size of the class of this college is larger than that of last year, at the beginning of the session, notwithstanding the increase in the severity of the conditions of matriculation and graduation, voted last spring.

Rush College commenced her course of lectures with public exercises, on the evening of the 2d ult. Prayer was offered by Rev. Prof. Hyde, and President Allen spoke a few words on the lives, character and services of the three distinguished men who had preceded him in the presidential chair, Drs. Brainard, Blaney and Freer.

The regular address of the occasion was delivered by Prof. J. H. Etheridge, who had chosen for his subject, "Waste and Repair."

The class at the opening of the session is over 350.

The Woman's Hospital Medical College began her annual term with a jubilee and much felicitation on the evening of the 9th ult. Notwithstanding a drenching rain, the evening was a gala time for this institution. The college has a right to congratulate herself, and receive the congratulations of her friends and neighbors, for she has moved into a new house, which is her own, where she intends to stay. The college building on Lincoln street, opposite the County Hospital, which has been rebuilt for this institution, is the most com-

plete and convenient medical college building we know of. It is large enough to accommodate a class of one hundred; has two lecture rooms, a chemical laboratory, dissecting room, microscope room, museum, all the necessary closets and ante-rooms, and a parlor, and a statue of *Minerva* crowning the building.

The Chairman of the Building Committee, Prof. T. D. Fitch, made a statement of the history of the organization of the faculty and the building of the present structure.

Prof. C. W. Earle gave the address of the evening, which dealt with the history of the college, and the subject of the education of women in medicine in Chicago.

Prof. W. E. Quine made a brief speech in behalf of the new members of the faculty; and Dr. Ephraim Ingals, in a few happy impromptu words, congratulated the college, the faculty, and the movement for the medical education of women, on the fortunate auspices under which the college this year was beginning its lecture term.

About thirty students are matriculated at this institution.

THE MEDICO-LEGAL INVESTIGATION OF SPERMATOZOA.—Ferrand. (*La France Médicale*, Oct. 3, 1877). One of the most difficult tasks of legal medicine, is the characterization of seminal stains. When the stains are old and have been subjected to either friction or freezing, it is often well-nigh impossible to separate the spermatozoids, and to secure them upon the stage of the microscope in sufficiently good condition and number to justify a positive and final conclusion as to their character. Almost invariably the animalecules have been broken. The large extremity generally called "the head," is detached from the filiform appendix which is called "the tail," the various parts are more or less deformed; and the dimensions and general aspect of the whole equally suggest either debris of tissue or organic infusoriae.

Longuet, after giving especial attention to this question, has recently communicated to the Society of Legal Medicine, the result of his researches. The procedures employed by him for the recognition of the spermatozoids, are so simple and practical, that they deserve to be given a wider publicity.

The first requisite on the part of the expert is a manipulation, which is the same, whatever method be finally adopted for the isolation of the elements. It consists in putting a piece of the solid material in contact with distilled water, so that by imbibition, the tissue itself and the material with which it is impregnated may become swollen. This done, it is placed on a slide of clean dry glass by the aid of needles, when it is carefully picked apart in such a manner as not to break any elements that may be present. Thread by thread, and fibril by fibril, the careful dissection is made until each form is isolated and subjected to a minute examination in turn under the objectives of the microscope. In order to render the whole more visible and to better limit the contour, a weak solution of iodine is used for the purpose of staining the tissue.

Too much precaution cannot be taken. The trouble with the procedure is, that however careful the expert may be, he is liable to create artificial spermatozooids which may be confounded with the real. "Certain vegetable fibrillæ, particularly those of hemp, contain in their interior, certain ovoid granulations, slightly flattened in their longest diameter and very refractive, which precisely resemble, in dimensions, aspect and form, the so-called head of the anamalcule. These granules become free as soon as the cellules are destroyed, and are dispersed in the liquid where the debris of the material is floating."

Longuet accordingly has searched for a coloring matter which by its elective action would permit one to distinguish between the anamalculæ and the vegetable detritus; and, after numerous essays, he succeeded with ammoniacal carmine, such as the histologists use. The spermatozooids behave differently in the presence of the carmine, according as they are fresh, or old and dry. When recent they are very slightly changed; when old, they fix the color with great intensity, more particularly in the large extremity, the so-called "tail" remaining uncolored. This singular property suffices for their immediate recognition, even when they are surrounded by foreign elements which affect analogous forms.

The author advises as follows:

1. Take a small square of the material, supposed to be stained with semen, cut as nearly as possible from the centre of the stain.
2. Plunge the little square of material into a small quantity of distilled water, colored by a few drops of an ammoniacal solution of carmine (5 or 6 drops to 5 grammes of water).
3. Leave this to macerate for 36 or 48 hours, and even more, for no inconvenience will result.
4. Separate the threads of the material very carefully, thread by thread and fibre by fibre.
5. Isolate each separate fibre.
6. Examine each separately by the microscope, with an enlargement of 500 diameters, each morsel being placed in a drop of ordinary glycerine.

In a preparation thus made, clusters of spermatozoids will be seen for the most part entire, "the head" colored a light red, "the tail," without tint, disseminated among non-coloured vegetable fibrillæ of perfect refraction.

The advantage of this method lies in the fact that the results are most decisive according as the stain is old—that is, under the most unfavorable circumstances, for nothing is more easy than the isolation and recognition of spermatozoids in recent stains.

Editorial.

ADVERTISING—PROFESSIONAL AND COMMERCIAL.—Not long since two advertising pamphlets were extensively circulated throughout this city, largely filled with certificates of certain physicians of the city of New York, attesting the virtues of the Hunyadi János, and the Apollinaris mineral waters. The majority of the names signed to the certificates appear in both of the pamphlets. To establish the identity of the persons, the certificates are preceded by elaborate headings, which narrate what chairs those making them, occupy in a particular college—the hospitals in which they hold appointments—and

of one, we are even favored with his office address. The certificates are so much alike that the doctors could have exchanged signatures without doing each other injustice; or they might have written, as one did, "I fully concur in the above." A careful perusal of these pamphlets engenders the doubt whether the advertisements are designed chiefly for the benefit of the venders of these remarkable waters, or for that of certain doctors in New York city, who fill chairs in a college named—who are connected with certain hospitals, and who may be consulted by the afflicted at a widely advertised number and avenue. Immediately after these pamphlets had been disseminated through the mails, an abbreviation of the certificates, with the names of those making them, appeared in displayed letters in the most conspicuous place of the leading daily papers of the city of Chicago: and these advertisements have been reissued from day to day to the present time. The action of these physicians, if not less defensible, would be less noticed, if analysis of the waters revealed in them any unusual properties. The principal ingredients of the Hunyadi János water seem to be the sulphate of magnesia, and the sulphate and bicarbonate of soda; a simple saline laxative, such as may be obtained at every drug-store, however unpretending; or from the saddle bags of any backwoods' doctor. We never before have known so many eminent names invoked, for so simple a purpose, as to prescribe a "dose of salts." Truly a mountain has labored, and less than a mouse is produced.

We write both in sorrow and in anger. These gentlemen, standing in the medical profession among the first in America, owe an apology for this act; they should publicly make such penitential confession, as may prevent this disgrace from ever being quoted as a precedent. It is a palpable violation of the spirit: if not of the letter, of the code; and the code should be observed by members eminent in the profession, if not by others. If these certificates had appeared over the autographs of so many designing charlatans, there would have been a manifest fitness in the whole transaction. The city of New York is one of the centres of medical education in this

country; and these saline professors are enrolled among its teachers; and this act of theirs is certainly a most reprehensible example to set before the pupils under their instruction, as well as to the entire profession and public. It is a satisfaction to us that we at no time have had occasion to blush for any such flagrant violation of professional propriety in the West.

OFFICIAL LIST of Licentiates of the Illinois State Board of Health who have qualified since the last announcement made in this JOURNAL:

Frederick Seymour, Cincinnati College of Medicine and Surgery.....	Feb. 18th, 1856
Daniel Lord, Chicago Medical College.....	March 13th, 1873
Charles N. Dorion, Hahnemann Medical College, Chicago.....	March 23d, 1869
Isadore Cohen, the University of Vienna, Austria.....	July 21st, 1873
C. A. Helmuth, the University of Berlin, Prussia.....	1844
John Henry Byrne, Rush Medical College	Feb. 17th, 1874
G. L. Henderson, Chicago Medical College	March 9th, 1868
E. F. Ingla, Rush Medical College.....	Feb. 1st, 1871
William Goetz, University of Tubingen, Wurtenburg, Germany.....	May, 1842
D. R. Brower, Med. Department, Georgetown College, Georgetown, D.C.	March 3d, 1864
Jno. R. Buchan, Long Island Hospital Medical College, Brooklyn, N. Y.	June 26th, 1872
N. P. Pearson, University of Copenhagen, Copenhagen.....	June 20th, 1853
George W. Hilton, Hahnemann Medical College, Chicago.	Feb. 22d, 1877
Charles J. Simons, Albany Medical College, Albany, N. Y.	Dec. 24th, 1876
William H. Woodbury, Hahnemann Medical College, Chicago.....	March 1st, 1866
R. H. Bingham, Castleton Medical College, Castleton, Vt.	Nov. 21st, 1849
D. A. K. Steele, Chicago Medical College, Chicago.....	March 13th, 1873
Leonard St. John, Royal College of Surgeons, London, Eng.	Nov. 20th, 1873
A. H. Tagert, The University of Vermont, Burlington, Vt.	June 9th, 1866
E. M. P. Ludlam, Hahnemann Medical College	Feb. 26th, 1861
A. E. Small, Medical Department Pennsylvania College, Philadelphia, Pa.	March, 1842
George W. Godner, Chicago Medical College, Chicago.	April 10th, 1869
S. D. Jacobson, The University of Copenhagen, Denmark	June 20th, 1863
F. L. Breidenstein, The University of France, Strasburg.....	Sept. 10th, 1841
W. K. Evanson, Eclectic Medical College of Pennsylvania.	
L. W. Case, Rush Medical College, Chicago.....	Feb. 2d, 1870
John Schuller, University of Giesen-Giesen, Hesse Darmstadt.....	Dec. 6th, 1854
Matthew O. Jones, Medical Department University of Pennsylvania, Pa.	March 8th, 1850
E. W. Edwards, Washington College, Baltimore, Md.	Feb. 20th, 1846
Frank W. Edwards, Rush Medical College, Chicago.	Feb. 23d, 1876
A. W. Gray, Chicago Medical College, Chicago	March 4th, 1868
J. A. St. John, Chicago Medical College, Chicago	March 13th, 1873
F. B. Ives, Rush Medical College, Chicago.....	February, 1850
Geo. M. Emmerick, Chicago Medical College	March 13th, 1873
Charles E. Davis, University of Michigan.	March 1st 1874
Eugene A. Mullan, Jefferson Medical College.....	March 11th, 1874
C. C. Higgins, University of Iowa, Keokuk.....	June 25th, 1863

Allen W. Hagenbuch, Rush Medical College.....	Feb. 15th, 1876
Peter J. Rowan, University of Toronto, Canada.....	June 8th, 1870
A. S. MacLennan, Royal Col. of Physicians and Surg., Kingston, Canada. Mar. 2 th, '73	
S. Saur, Georgetown College, D. C.....	March 15th, 1855
A. S. Munnéell, Chicago Medical College.....	March 14th, 1871
A. L. Freund, Bennett Medical College.....	Feb. 21st, 1877
John H. Hollister, Berkshire Medical College.....	Nov. 7th, 1847
George W. Gurnea, Rush Medical College.....	Feb. 21st, 1877
Temple S. Hoyne, Bellevue Hospital Medical College.....	March, 1865
John B. Braun, University Erlangen, Bavaria.....	June 14th, 1848
C. P. Simon, University of Leipsic, Saxony.....	Jan. 2d, 1864
James Lawless, Rush Medical College.	Feb. 21st, 1877
A. R. Jackson, Medical Department of Pennsylvania College.....	March 7th, 1848
T. Hoffman, Rush Medical College.	
G. A. H. Sienanek, Chicago Medical College.....	March 20th, 1877
J. F. Schafer, Rush Medical College.....	Feb. 19th, 1873
J. M. Hall, College of Physicians and Surgeons, New York City.....	March 3d, 1874
F. Cheavett, Bennett Medical College.....	Feb. 27th, 1869
M. H. Luken, Rush Medical College.....	Feb. 19th, 1873
W. J. Johnson, Chicago Medical College.....	March 4th, 1868
T. C. Duncan, Hahnemann Medical College, Chicago.....	March 1st, 1866
Annie E. Bailey, Hahnemann Medical College, Chicago.....	Feb. 11th, 1875
R. Tilley, Chicago Medical College.....	March 21st, 1871
J. A. Mead, Rush Medical College.....	Feb. 15th, 1876
T. S. Bidwell, Western Reserve College, Ohio.....	Feb. 24th, 1863
N. L. Hurlbut, Rush Medical College.....	1852
Charles G. Smith, University of Pennsylvania.....	March, 1851
Helen J. Underwood, Female Medical College, New York City.....	March 21st, 1872
L. Pratt, Pennsylvania H.-meopathic Medical College.....	March 1st, 1852
C. C. Spry, Chicago Medical College.....	March 4th, 1874
J. R. Kippax, Hahnemann Medical College, Chicago.....	March 1st, 1869
Marcus Swain, Dartmouth Medical College, N. H.....	Oct. 28th, 1833
T. Wild, Rush Medical College.....	Jan. 25th, 1865
N. W. Abbott, Berkshire Medical College.....	November, 1844
S. J. Jones, Medical Department University of Pennsylvania.....	March 15th, 1860
R. C. Hamill, Licentiate Ohio Med. Col. 1838; Rush Medical College.....	Feb. 25th, 1861
H. M. Lyman, College of Physicians and Surgeons, N. Y.....	March 14th, 1861
H. Moer, Eclectic Medical College, Cincinnati.....	May 28th, 1864
Frank H. Davis, Chicago Medical College.....	March 14th, 1871
G. Hessert, University of Wurzburg, Germany.....	Aug. 14th, 1858
H. Kir-chstein, University of Breslau, Germany.....	June, 1862
Jacob Dul, Hahnemann Medical College	March, 1872
H. P. Merriman, Chicago Medical College.....	March 9th, 1865
S. W. Austin, Albany Medical College, Albany, N. Y.....	Dec. 28th, 1854
Wm. J. Hawkes, Homeopathic Medical College, Philadelphia.....	March 1st, 1867
R. E. Ulrich, University of Wurzburg, Germany.....	July 7th, 1871
Lizzie Dyon, Female Medical College of Pennsylvania.....	March 15th, 1864
Thomas Bevan, Medical College of Ohio.....	March 4th, 1851
A. N. Sheffner, Bennett Medical College, Chicago.....	May 21st, 1875
Jacob S. Kauffman, Rush Medical College.....	Feb. 16th, 1875
George H. Hall, Hahnemann Medical College, Chicago,.....	February, 1864
Henry H. Sloan, Chicago Medical College.....	March 20th, 1869
L. Bedford, Homeopathic Medical College of Pennsylvania.....	Feb. 24th, 1866
C. H. Von Tagen, Homœopathic Medical College, Pennsylvania.....	March 2d, 1858
J. A. Lane, McGill College, Montreal, Canada	March 28th, 1877
R. N. Token, Bellevue Hospital, Medical College, New York City.....	March 1st, 1875
J. A. McWilliams, Chicago Medical College.....	March 1st, 1876
James E. Gross, Hahnemann Medical College, Philadelphia.....	March, 1850

N. S. Davis, Fairfield Medical College.....	Jan. 31st, 1837
Wm. H. Morgan, Rush Medical College.....	Feb. 17th, 1874
J. A. Freeman, American Medical College, Cincinnati, Ohio.....	Feb 3d, 1855
J. V. Bachelle, Rush Medical College.....	Jan. 25th, 1861
E. H. Horsey, Queen's University, Kingston, Canada.....	April 15th, 1869
William A. Crocker, Medical Department University of New York	March 15th, 1876
Peter S. Macdonald, Rush Medical College.....	1864
Arthur B. Hosmer, Chicago Medical College.....	1875
William S. Johnson, Hahnemann Medical College, Chicago.....	1868
Henry Tomboeken, Rush Medical College.....	1866
James P. Mills, Hahnemann Medical College, Philadelphia.....	1874
Pierre Marchand, University of Vermont, Burlington, Vt.,	1862
Luther C. Bean, Woodstock Medical College, Woodstock, Vt.,	1849
Andrew J. Baxter, Ohio Medical Coll.....	March 4, 1861
George E. Shipman, College of Physicians and Surgeons, New York City.....	Sept. 2, 1843
Elihu G. Cook, Western Homopathic College of Cleveland, Ohio.....	Feb. 27, 1863
A. B. Wescott, Eclectic Medical Institute, Cincinnati, Ohio.....	Feb. 15, 1857
Louise M. Dawson, Woman's Hospital Medical College, Chicago.....	Feb. 27, 1877
Albert G. Beebe, Bellevue Hospital Medical College, New York	March 1, 1870
Juliet Caldwell, Homeopathic Medical College, University of Michigan.....	March 28, 1877
Edmund C. Rogers, Albany Medical College.....	January 25, 1853
James Nevin Hyde, Medical Department University of Pennsylvania	March 13, 1863
Fred. A. Beck, Chicago Medical College.....	March 20, 1877
Edward B. Taylor, Bennett Eclectic Medical College, Chicago.....	Feb. 21, 1877
Alfred G. Schloesser, Rush Medical College.....	Feb. 1, 1871
William R. McLaren, Hahnemann Medical College, Chicago.....	Feb. 20, 1871
Samuel P. Hedges, Hahnemann Medical College, Chicago.....	March, 1867
A. B. Newkirk, Starling Medical College, Columbus, Ohio.....	March 1, 1849
Robert B. sch. University of Rostock, Germany.....	Nov. 2, 1864
Mary A. Ries, Bennett Eclectic Medical College, Chicago.....	Feb. 22, 1877
Ferdinand C. Hotz, University of Heidelberg, Germany.....	Dec. 16, 1865
Nelson H. Church, Rush Medical College, Chicago.....	Feb. 3, 1869
Eugene Marguerat, University of New York, New York City	March, 1859
Christopher C. P. Silva, Funchal College, Madeira Isl'd, Portugal.....	October, 1861
George O. Rutledge, Chicago Medical College.....	March 20, 1877
William P. Dunne, Rush Medical College.....	Jan. 25, 1867
Julia H. Smith, Chicago Homeopathic Medical College.....	March 5, 1877
George A. Hall, Homeopathic College, Philadelphia.....	March 1, 1856
Raymond L. Leonard, Rush Medical College.....	Feb. 17, 1872
S. C. Pitcher, Jefferson Medical College, Philadelphia.....	March 10, 1864
Fred. F. Laws, Chicago Medical College.....	March 10, 1874
Hans Jacob G. Koren, Collegium Fredericianum Regiae Academicum Universitatis, City of Christiania, Norway.....	June 7, 1869
F. R. Mergier, University of Wurzburg, Germany.....	Feb. 15, 1840
Fred. Schubart, University of Heidelberg, Germany.....	Nov. 24, 1851
Harry Brown, McGill College, Montreal, Canada.....	March 18, 1873
Patrick M. O'Connell, Missouri Medical College, St. Louis.....	March 2, 1877
James H. Etheridge, Rush Medical College.....	Feb. 4, 1869
William W. Winter, Eclectic Medical Institute, Cincinnati, Ohio.....	May 17, 1859
Edward H. Webster, Chicago Medical College.....	March 20, 1877
B. P. Reynolds, Eclectic Medical College of Pennsylvania, Philadelphia.....	March, 1863
H. C. Jessen, Hahnemann Medical College of Missouri, St. Louis.....	March 1, 1874
Ceo. W. Williams, Chicago Medical College.....	March 13, 1873
George Kellogg, Buffalo Medical College, Buffalo, N. Y.....	Feb. 25, 1854
John W. Tope, Rush Medical College.....	Feb. 2, 1870
Edmund Andrews, Medical Department University of Michigan.....	April 6, 1852
Charles L. Rutter, Chicago Medical College.....	March 4, 1868
Sigmund D. Neve, Hahnemann Medical College, Chicago.....	Feb. 22, 187

Benjamin E. Dailey, Georgetown College, D. C.	March 10, 1874
E. G. H. Miessier, Hahnemann Medical College, Chicago.	Feb., 1873
Jacob Breen, Georgetown Medical College, D. C.	March 9, 1871
Helen A. Heath, Chicago Homeopathic Medical College.	March 5, 1877
David S. Smith, Jefferson Medical College, Philadelphia.	March 14, 1836
Mary H. Thompson, Chicago Medical College.	March 22, 1870
Henry N. Small, Hahnemann Medical College, Chicago.	March 1, 1866
David B. Trimble, Jefferson Medical College, Philadelphia.	March 12, 1837
Chas. H. Lovewell, University of Michigan.	March 29, 1871
F. L. Wadsworth, Rush Medical College.	Feb. 3, 1869
Albert E. Hoadley, Chicago Medical College.	March 12, 1872
Henry Banga, University of Basle, Switzerland.	Sep. 16, 1871
Oliver T. Shenick, Rush Medical College.	Feb. 21, 1877
Xenophon Chapman, Chicago Medical College.	March 10, 1874
C. J. Lewis, Rush Medical College.	Jan 25, 1865
Christian Fenger, University of Copenhagen, Denmark.	Jan. 1867
Ephraim Ingals, Rush Medical College.	Feb. 14, 1847
Isidor Sax, Hahnemann Medical College, Chicago.	Feb. 24, 1877
Martin Phillips, Victoria College, Toronto, Canada.	April 4, 1862
T. Davis Fitch, Rush Medical College.	Feb., 1854
William Reinhold, Rush Medical College.	Feb. 5, 1868
Isaac N. Lilly, University of Louisville, Ky.	Feb., 1864
F. E. Sherman, Rush Medical College.	Feb. 17, 1873
W. C. Westerfield, St. Louis Medical College, Missouri.	March 2, 1859
Thomas A. Lilly, Kentucky School of Medicine, Louisville.	March, 1864
J. Ramsey Flood, Jefferson Medical College, Philadelphia.	March 10, 1866
Henry Geiger, University of Heidelberg, Germany.	Dec. 1861
James W. Hutchinson, Chicago Medical College.	March 3, 1867
C. W. Burrill, Chicago Medical College.	March 12, 1873
A. B. Clark, Chicago Medical College.	March 21, 1876
Henry T. Byford, Chicago Medical College.	March 18, 1873
Roswell Park, Chicago Medical College.	March 21, 1876
Geo. Keating Dyas, Chicago Medical College.	March 21 1869
Samuel H. Bottomley, Medical Department Lind University.	March 3, 1863
Alex. Sterl, University City of New York.	March 5, 1866
Louis Brann, R. M. College.	Feb. 15, 1876
A. W. Smith, Eclectic Medical Institute, Cincinnati, Ohio.	May 21, 1872
Patrick Henry McElroy, R. M. College.	Feb. 1, 1871
Rudolph Seiffert, University of Vienna, Austria.	Feb. 13, 1852
Hosmer A. Johnson, R. M. College.	Feb., 1852
Harlan P. Cole, N. Y. Homer Medical College.	March 3, 1872
" Chicago Medical College.	March 14, 1871
Henry Hooper, Medical Department Harvard University.	June, 1869

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, Nov. 5 and 19.

Chicago Society of Physicians and Surgeons—Mondays, Nov. 12 and 26.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 to 4 p. m., by Prof. Holmes and Dr. Hotz.

Mercy Hospital—2 to 3 p. m. Surgical, by Prof. Andrews.

Rush Medical College—1:30 p. m. Medical, by Dr. Bridge.

County Hospital—8 p. m. Necropsy, by Dr. Danforth.

Woman's Medical College—3 p. m. Surgical, by Prof. Owens.

TUESDAY.

County Hospital—1:30 p. m. Medical, by Prof. Bevan; 2:30 p. m. Surgical, by Dr. Bogue.

Mercy Hospital—2 p. m. Medical, by Prof. Hollister.

Eye and Ear Infirmary—2 p. m. Prof. Jones.

WEDNESDAY.

County Hospital—1:30 p. m. Gynecological, by Prof. Fitch; 2:30 p. m. Ophthalmological, by Dr. Montgomery.

Mercy Hospital—2 p. m. Eye and Ear, by Prof. Jones.

Rush Medical College—4 p. m. Diseases of the Chest, by Prof. Ross.

THURSDAY.

Mercy Hospital—2 p. m. Medical, by Prof. Davis.

Rush Medical College—1:30 p. m. Neurological, by Prof. Lyman.

Eye and Ear Infirmary—2 to 4 p. m. Operations, by Prof. Holmes and Dr. Hotz.

FRIDAY.

Mercy Hospital—2 p. m. Medical, by Prof. Davis.

County Hospital—1:30 p. m. Medical, by Prof. Ross; 2:30 p. m., Surgical, by Prof. Gunn.

Woman's Medical College—10 p. m. Ophthalmological, by Dr. Montgomery.

SATURDAY.

Rush Medical College—2 p. m. Surgical, by Prof. Gunn.

Chicago Medical College—2 p. m. Surgical, by Prof. Andrews and Isham; 3 p. m., Diseases of Chest, by Prof. Johnson.

Woman's Medical College—12 m. Gynecological, by Prof. Fitch; 3 p. m. Dermatological, Dr. Maynard.

Special Clinics daily, from 2 to 4 p. m., at the South Side Dispensary, and at the Central Free Dispensary.

For schedule of lectures at the colleges, apply to the college janitors.